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The Epidemiology of Syphilis Based Upon Five Years' Experience in an Intensive Program in New York State*

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CLINICAL and laboratory studies of syphilis have given us certain basic knowledge regarding the disease in individuals which, applied to the disease in the population at large, will bring about a reduction in its prevalence if not its ultimate eradication. These facts are: that syphilis is readily transmitted from person to person and rarely by other means; that infectiousness is limited to the relatively early case except in pregnancy, during which transmission of the infection may occur even after many years; that modern antisyphilitic treatment will render patients temporarily noninfectious promptly and, if continued, will control infectiousness permanently. Obviously the first requisite in planning a program for syphilis control is to have information regarding the disease as a mass phenomenon in order that these fundamental facts may be utilized most effectively.

Although the value of the individual case report as the basic unit in the collection of morbidity data is well recognized, it is equally well recognized that until recent years at least, syphilis case reporting in the United States has been unsatisfactory. Morbidity reporting has afforded only a partial index of the problem, varying in accuracy from place to place according to the willingness of physicians to report cases voluntarily, and the ability of the health officer to check for completeness of reporting and to procure missing data.

Because syphilis case reporting has been unreliable, it was formerly necessary to resort to other methods for obtaining information concerning the prevalence of this disease. Prior to the advent of the complement-fixation test for syphilis, analyses of records of physicians, clinics and hospitals, and compilation of data from consecutive post-

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mortem examinations were the only sources of information. The reliability of the data so collected depended entirely upon the proficiency and interest of the attending physician or pathologist. The introduction of the serologic test reduced the inaccuracies in diagnosis considerably and led to the accumulation of fairly accurate information through serologic surveys of various population groups. The one day survey by questionnaire has provided an additional means of determining the extent of the syphilis problem.

Selection is inherent in varying degrees in each of these methods, but despite such limitations information has been thus secured concerning the prevalence of syphilis, focusing attention on the disease as one of the most important public health problems. Beyond this point, however, the value of such surveys diminishes. It is true that repeated surveys by any of these methods will establish the trend of syphilis, but because of the chronicity of the disease the same patients will be recounted, masking to some extent changes in incidence and prevalence. At best they give us information as to what *has* occurred. They cannot be relied upon for current information upon which specific control procedures may be instituted or altered. The development of a method for the prompt and complete collection of accurate case reports is essential if we are to make the best use of the facilities at our disposal.

On January 1, 1936, the New York State Department of Health inaugurated an intensive syphilis control program, one of the objectives of which has been to obtain complete and accurate case reports for all cases of syphilis coming to the knowledge of health officials from any source. With the passing of 1940, 5 years' experience with this program had been completed. It is our purpose here to discuss the prevalence and trend of syphilis, based on the data accumulated during this period.

PROGRAM OF SYPHILIS CONTROL

Inasmuch as the procedures for the control of syphilis affect and are in turn affected by morbidity reporting, it is necessary for the interpretation of morbidity data that we understand the conditions under which these data are collected. Inasmuch as the New York State Syphilis Control Program has been described in detail elsewhere we shall not repeat it here. It is pertinent that every precaution was taken during the period under consideration to secure complete and accurate reporting of cases from clinics and private physicians and to remove duplicates of cases previously reported.

In addition to provisions for complete and accurate case reporting, the objectives of the program have been (1) to provide adequate diagnostic and treatment facilities; (2) to provide adequate facilities for investigations of syphilis cases and contacts; and (3) to promote a program for professional and lay education in modern concepts of syphilis and its control.

We shall not go into details regarding activities. It is signfiicant, however, that from 1936 through 1940, the number of serological tests for syphilis increased more than twice; that the clinic sessions and hours were considerably increased, with a corresponding increase in the quantity and quality of the work performed; that 9 counties adopted a plan for providing treatment by private physicians for cases unable to pay; that the distribution of antisyphilitic drugs increased more than 50 per cent; that physicians increasingly took advantage of the facilities for delinquent patient follow-up offered by state and local health departments; and that the consultation service was being used widely by the medical profession. The lay education program reached all parts of

the state, resulting, we believe, in a better public understanding of syphilis than ever before.

PREVALENCE OF SYPHILIS IN UPSTATE NEW YORK

During the 5 year period 1936–1940 there were 79,991 cases of syphilis reported in New York State exclusive of New York City (Table 1). Of these, 71,001 were classified as acquired syphilis and 5,880 as congenital. The type of infection was not known in 3,110 patients. Among the cases reported as acquired syphilis 8,194 were classified as early; 62,260 as late, and in 547 patients the stage of the disease was not stated. Thus, 89 per cent of the total cases reported were classified as acquired syphilis, 7 per cent as congenital, and 4 per cent were unclassified as to type. Of the acquired cases, 11 per cent were stated to be early, 88 per cent late, and in 1 per cent the stage of disease was unknown.

The discussion of these cases will be limited to their distribution by age, and according to the sizes of the communities from which they were drawn. Although the prevalence and attack rates were lower in the female than in the male, their distribution by age was essentially the same for both sexes. Inasmuch as New York State has a relatively small Negro population, concentrated in two metropolitan areas, about Buffalo, and New York City, classification of the cases by color would not change the picture.

In dealing with the acute communicable diseases, the terms "prevalence" and "incidence" are more or less synonymous. In the case of chronic diseases, however, they have distinct meanings. By prevalence, we mean the total number of cases existing at any one time, including newly acquired infections, and those of long duration. Incidence refers to the number of new infections introduced into the population during a period of time contributing to the total prevalence of the disease. These terms will be so used throughout this discussion.

The total number of cases of syphilis reported in New York State (exclusive of New York City), and rates per 100,000 population, grouped according to age, are shown in Table 2. It will be observed that an appreciable number of cases of syphilis were brought under observation during childhood. The rates were higher for those of less than 5 years of age than for the two succeeding groups. Beginning with the age group 15–19 years there was a sharp

TABLE 1

Reported Syphilis Cases and Rates per 100,000 Population by Type of Disease and State of Infection*

New York State (Exclusive of New York City)

1936–1940

	Cases							*Case Rates*						
		Acquired							*Acquired*					
Year	*Total*	*Total*	*Early*	*Late*	*Unknown*	*Congenital*	*Unknown*	*Total*	*Total*	*Early*	*Late*	*Unknown*	*Congenital*	*Unknown*
Total	79,991	71,001	8,194	62,260	547	5,880	3,110	...	...	...	...	...	...	...
1936	18,244	14,390	2,268	11,709	413	1,291	2,563	310	245	39	199	7	22	44
1937	18,228	16,631	2,128	14,483	20	1,532	65	309	282	36	246	†	26	1
1938	16,558	15,076	1,706	13,340	30	1,339	143	278	254	29	225	†	22	2
1939	14,266	12,995	1,081	11,878	36	1,074	197	238	218	18	199	†	18	3
1940	12,695	11,909	1,011	10,850	48	644	142	210	198	17	181	†	11	3

* July 1 estimate based on 1940 census

† Less than 1 per 100,000 population

TABLE 2

Total Reported Syphilis Cases and Rates per 100,000 Population by Age Group*
New York State (Exclusive of New York City)
1936–1940

Age Group	Cases						Case Rates				
	Total	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
Total	79,991	18,244	18,228	16,558	14,266	12,695	310	309	278	238	210
Years											
Under 5	1,119	295	252	227	216	129	76	65	58	55	32
5–9	669	169	170	118	121	91	40	40	28	28	21
10–14	877	225	245	156	139	112	48	52	33	29	23
15–19	2,745	668	671	559	476	371	132	132	109	92	72
20–24	7,495	1,938	1,701	1,506	1,260	1,090	397	346	304	253	218
25–29	9,943	2,303	2,440	2,040	1,735	1,425	513	540	449	379	310
30–34	9,808	2,221	2,253	2,066	1,741	1,527	495	499	455	381	332
35–39	9,492	2,120	2,240	1,938	1,718	1,476	472	496	426	376	321
40–44	8,800	1,959	2,121	1,819	1,457	1,444	436	470	400	319	314
45–49	7,547	1,599	1,758	1,562	1,360	1,268	375	410	362	311	290
50–54	7,066	1,369	1,651	1,523	1,345	1,178	369	442	406	401	310
55–59	4,890	901	1,005	1,134	942	908	309	343	384	315	304
60+	7,748	1,341	1,523	1,724	1,580	1,580	184	207	233	212	211
Unknown	1,792	1,136	198	186	176	96	...	...	...	...	...

* July 1 estimate based on 1940 census

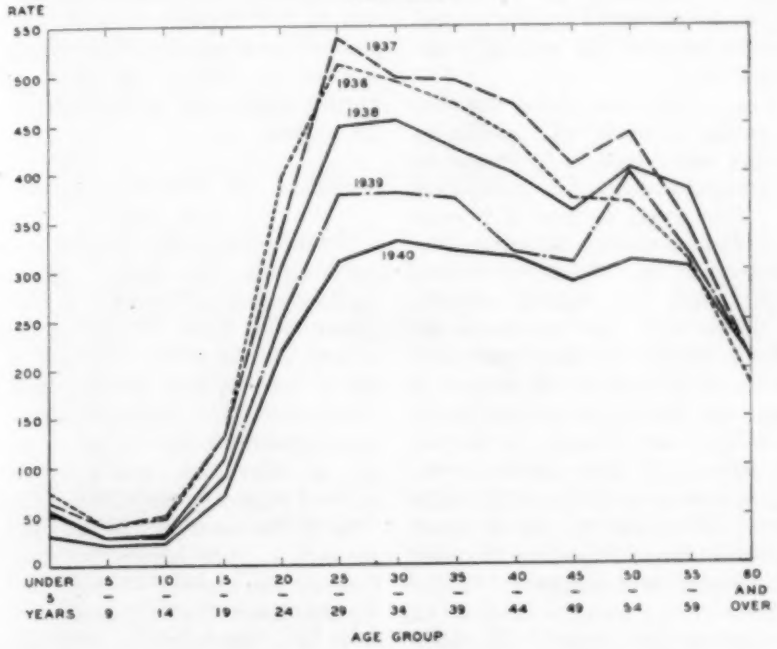
rise in the prevalence rates, reaching a peak in 1936 and 1937 in the age group 25–29 years, flattening off in 1938–1939 to a peak between 25 and 34 years, and resulting in a definite peak at 30–34 years in 1940. Following the peak prevalence, there was a gradual decline in prevalence rates up to 50–54 years, when in 1936 there was a deceleration of the decline, and in the succeeding 4 years an actual increase in prevalence rates in this group, followed by an uninterrupted decline in the older age groups.

Figure 1 presents graphically the prevalence rates for each of the years under consideration. It is notable that for each year after 1937 there was a reduction in newly discovered case rates for each age group (except for those of 55–59 years and over 60 years in 1938). The decrease was proportionately greater in younger persons, the rates for the 10–14 year age group having declined 52.1 per cent by 1940, those of 15–19 years by 45.5 per cent, of 20–24 years by 44.9 per cent, and for 25–29 years by 39.6 per cent. The decrease in rates beyond this group was less marked, though definite. By 1940 the curve had flattened out so that the rates of reported cases in young adults was only slightly higher than for older persons.

In interpreting these figures, we must first consider the circumstances under which they were obtained. As pointed out previously, all records of cases reported prior to January 1, 1936, were disregarded in building the present case register. The cases reported during 1936, therefore, were drawn from (1) the unknown number of cases under physicians' care at the beginning of the year, together with (2) old cases diagnosed for the first time during the year, and (3) newly acquired infections coming under medical observation. Duplicate reports for patients recorded for the first time within the year were eliminated but no attempt was made to remove duplicate records of those reported prior to the inauguration of the new method. The reporting system in 1936 was more or less in the nature of an annual survey of cases under treatment, except that the identities of the individuals were established. In 1937, the reports included those of old patients missed in 1936 together with new in-

FIGURE 1

TOTAL REPORTED SYPHILIS CASE RATES, PER 100,000 POPULATION, BY AGE GROUPS
NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY
1936–1940



fections of 1937 and those acquired during the previous year but failing to seek medical advice prior to 1937. An analogous situation existed during the subsequent 3 years. These reductions in the figures from year to year do not necessarily indicate a decrease in the prevalence of syphilis, however. They may indicate only the extent to which the "pool" of unknown but already existing cases is brought under treatment. As the size of the "pool" is reduced and as patients are discovered early the curve of total patients should approach that of early ones. It is claimed that this has occurred in Sweden and that reports of new cases indicate the total. We have a long way to go to reach this objective.

The decline in the rates in the young adult groups may be significant. It is well known that syphilis has its onset with greater frequency in these years. We also know that reporting is not wholly accurate and that errors may be made in the classification of cases. Whether or not the cases represented here are classified as early or late, they represent a potentially infectious group because of the relatively short duration of their infections, and their discovery and treatment should reduce the number of infectious cases at large and thereby reduce the risk of exposure to syphilis. It is encouraging that the reduction in rates has been greater in these than in any other groups. Syphilis in childhood beyond the first few years of life, and in adults beyond the middle thirties is of little importance from the standpoint of syphilis control. The former generally represents a late con-

genital infection, the latter the end results of an infection acquired in younger years. Neither is a danger from the standpoint of infectiousness. Both may be prevented by the control of syphilis between the critical years of 15 and 34.

It is not infrequently stated that, because of the chronicity of syphilis, its prevalence would tend to be greater in older groups because of a cumulative effect. This would be true if it were not for factors tending to reduce the prevalence of the disease in them. Surveys, which our figures support, have shown that the prevalence of syphilis is highest in these groups in which the acquisition of the disease is greatest, and that a decline in prevalence follows very closely the decline in incidence. In other words, beginning with population groups of 35 years and over, the number of cases removed annually is larger than the number added through new infections. There are three factors tending to bring about the reduction of syphilis in these groups, namely, spontaneous cures in the untreated, cures by treatment, and deaths among syphilitics in excess of the non-syphilitics. The degree to which each is responsible has been variously estimated, but is still unknown; their combined effect is considerable.

With this in mind, let us consider the prevalence of syphilis in the 50–54 year age group. It will be noted that the annual rates in this group are higher than in the 45–49 year group except for 1936, the first year of the program. A definite explanation for the apparent greater prevalence in the 50–54 year group cannot be given. It cannot be attributed to newly acquired infections. The number of such cases was very low. Nor does it seem reasonable that efforts at case finding were more productive for this group. Physical incapacitation from late syphilis usually occurs between 40 and 50 years, and had the disease itself been responsible for bringing larger numbers of cases to light, its effects would have been reflected there. The most likely explanation is that syphilis reached epidemic proportions when the group of persons now 50–54 years of age were young. Further studies are being made to find the answer.

INCIDENCE OF SYPHILIS IN UPSTATE NEW YORK

Let us refer to the reported cases of early syphilis for further light upon the occurrence and trend of syphilis in upstate New York. As indicated previously, early syphilis is defined on the report card as that of less than one year's duration. Such cases after 1936 were subdivided into primary, secondary, or other early, which latter term referred largely to early latent cases.

While the cases in existence prior to January 1, 1936, should not have influenced the number of cases of early syphilis reported after January 1, 1937, there is a possibility of such influence in the "other early" classification. Physicians may report young adults as early cases when no history of a chancre or secondaries has been obtainable, relying upon the probability of a short duration of the disease in these patients. The distribution of these cases, however, is exactly the same as that of primary or secondary syphilis, so we believe that, with few exceptions, cases so reported actually were early.

During the 5 year period 1936–1940, 8,194 cases of early syphilis were reported in New York State exclusive of New York City. Of these, 2,513 were classified as primary, 1,884 as secondary, 1,021 as "other early," and 2,776 of unstated type. Their distribution by years is shown in Table 3.

The distribution of these cases according to age, is presented in Table 4. As would be expected, the attack rates during childhood were low. There was

TABLE 3

Number of Reported Acquired Early Syphilis Cases
New York State (Exclusive of New York City)
1936–1940

Diagnosis	*Total*	*1936*	*1937*	*1938*	*1939*	*1940*
Primary	2,513	*	898	711	447	457
Secondary	1,884	*	608	594	355	327
Other early	1,021	*	352	252	221	196
Early, type not stated	2,776	2,268	270	149	58	31
Total early	8,194	2,268	2,128	1,706	1,081	1,011

* The type of early syphilis was not designated on the report card in use in 1936.

a marked rise in early acquired syphilis in the 15–19 year age group, peak incidence being reached at 20–24 years. There was relatively little difference in the rates for the latter group and the group 25–29 years. Following this, the attack rates dropped markedly and continued to decrease for subsequent age groups.

These figures are in accord with clinical observations to the effect that syphilis occurs with greatest frequency during young adult life. They further support the premise that control of syphilis among young adults will lead to a reduction of the disease throughout the life span.

Of particular interest is the reduction in the number of early cases of syphilis reported, and the decline in attack rates which occurred in the 5 year period. In 1936 there were 2,268 early cases reported, or 39 per 100,000 population, as compared with 1,011 cases, or 17 per 100,000 population in 1940, a reduction of 56 per cent. This decline was observed for every age group except the childhood groups in which the attack rates were already very low, and the number of cases relatively unimportant.

The decrease in reported early cases from year to year considered alone is not an indication of an actual reduction

TABLE 4

Reported Early Syphilis Cases and Rates per 100,000 Population by Age Group*
New York State (Exclusive of New York City)
1936–1940

Age Group	*Cases*						*Case Rates*				
	Total	*1936*	*1937*	*1938*	*1939*	*1940*	*1936*	*1937*	*1938*	*1939*	*1940*
Total	8,194	2,268	2,128	1,706	1,081	1,011	39	36	29	18	17
Years											
Under 5	70	30	15	9	16	..	7	4	2	4	..
5–9	10	3	6	..	1	..	†	1	..	†	..
10–14	55	9	20	12	7	7	2	4	3	2	2
15–19	851	214	197	187	147	106	44	39	37	29	20
20–24	2,131	583	534	435	286	293	119	109	88	58	59
25–29	1,864	493	505	382	253	231	110	112	84	55	50
30–34	1,153	309	301	249	161	133	69	67	55	35	29
35–39	733	200	179	177	89	88	45	40	39	20	19
40–44	470	139	140	96	43	52	31	31	21	9	11
45–49	299	88	84	52	28	47	21	20	12	6	11
50–54	216	58	65	43	25	25	16	17	11	7	7
55–59	117	30	37	22	11	17	10	13	7	4	6
60+	100	26	24	32	9	9	4	3	4	1	1
Not stated	125	86	21	10	5	3	..	..	..	..	..

* July 1 estimate based on 1940 census
† Less than 1 per 100,000 population

in the incidence of syphilis. It could mean that we are increasingly failing to discover cases at their inception. We may point out, however, that the decline in reported cases in New York State has occurred during a period when greater effort than ever before was being made to bring patients under observation. Under the circumstances, we believe the data to reflect an actual decrease in syphilis in the state.

A disturbing feature is the slight reduction observed in 1940. It may indicate greater sexual promiscuity accompanying the present crisis and resulting in increased exposure to syphilis, or it may be that the law of diminishing returns is having an effect, and that additional procedures are necessary in order further to reduce the occurrence of new infections. It is doubtful that further expansion of general measures, such as education and case finding through routine serological testing, will accomplish a great deal. Perhaps the time has come when the number of early cases is small enough, that investigations of contacts of each early case should be undertaken as a routine procedure.

CONGENITAL SYPHILIS

Congenital syphilis is, of course, the direct result of infectious syphilis among childbearing women, many of whom are noninfectious from the standpoint of less intimate contact. Since the infection may be transmitted to the fetus for many years after the onset of the mother's infection, the number of early congenital cases (of less than 1 year) affords no index of the number of early infections among the childbearing population. A decline in early congenital infections is, however, indicative of a decrease in prevalence among the mothers.

The same factors influence the interpretation of the data relative to congenital syphilis as apply to those of acquired cases. A number of cases of less than 5 years of age were in existence at the beginning of 1936. Some of these were first reported each year until 1940. The significant groups, from our point of view then, are those of less than 1 year of age from 1937 on, and for 1940 those of less than 5 years. All of these had their onset after the inauguration of the program, and reflect the trend of congenital syphi-

TABLE 5

Reported Congenital Syphilis Cases and Rates per 100,000 Population by Age Group*
New York State (Exclusive of New York City)
1936–1940

Age Group	Cases						Case Rates				
	Total	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
Total	5,880	1,291	1,532	1,339	1,074	644	22	26	22	18	11
Years											
Under 1	733	178	153	167	149	86	213	181	192	173	93
Under 5	1,030	255	236	215	199	125	66	60	55	50	31
5–9	623	142	158	115	120	88	34	38	27	28	21
10–14	746	183	212	132	122	97	39	45	28	25	20
15–19	944	217	260	200	164	103	43	51	39	32	20
20–24	787	159	194	196	146	92	33	39	40	29	19
25–29	564	96	154	145	112	57	21	36	32	24	12
30–34	362	57	90	108	70	37	13	20	24	15	8
35–39	240	51	50	65	53	21	11	11	14	12	5
40–44	179	33	50	56	28	12	7	11	12	6	3
45+	364	77	120	98	58	11	4	7	5	3	†
Not stated	41	21	8	9	2	1	..	..	..	..	..

* July 1 estimate based on 1940 census
† Less than 1 per 100,000 population

lis during the first 5 years of its operation.

Table 5 shows the distribution of cases of congenital syphilis for 1936 through 1940. The trend of congenital infections was not as constant as that for acquired syphilis during this period. It is important, however, that the rate for congenital infections reported during the first year of life in 1940 was 57 per cent less than that for 1936.

The reduction in congenital syphilis cases was not appreciable until 1940. In this connection it may be said that in March, 1938, a new law requiring serological tests on all pregnant women became effective, and in July of that year legislation requiring examination for syphilis among applicants for marriage licenses was enacted. To what extent these laws contributed to the marked reduction in congenital syphilis in 1940 is a matter of conjecture. In our opinion the prenatal law should not have had a great influence by 1940 since such a large proportion of women do not seek medical advice until late in pregnancy when transmission has already occurred. The discovery of syphilis through these late prenatal examinations leads to treatment following delivery which decreases the probability of transmission during subsequent pregnancies. Premarital examinations may have contributed to the reduction in congenital syphilis through preventing the marriage of infectious syphilitics. On the other hand, the general provisions of the syphilis control program may have been largely responsible. A study of this entire problem is being made at this time.

GEOGRAPHIC DISTRIBUTION

The geographic distribution of syphilis cases reported in New York State supports the view that the disease is more prevalent in urban areas (Table 6). In the beginning the rates were proportionately higher as the population increased, save for the places of over 250,000 population. This latter group included only the cities of Buffalo and Rochester. The relatively low rate for the combined populations in these cities was due largely to the very small number of cases reported in Rochester which for a long time has conducted a well organized program for the control of syphilis. A reduction in the syphilis prevalence rates occurred throughout all population groups during the 5 years. It is encouraging that the decline was more pronounced in the cities of 10,000 population and over, in which greater effort was made to control the disease.

TABLE 6

Reported Syphilis Cases and Rates per 100,000 Population by Population Group*
New York State (Exclusive of New York City)
1936–1940

Population Group	Cases						Case Rates				
	Total	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
Total	79,991	18,244	18,228	16,558	14,266	12,695	310	309	278	238	210
Places over 250,000	11,329	2,670	2,770	2,128	2,142	1,619	298	309	238	239	181
50,000–250,000	18,449	4,822	4,049	3,079	3,057	2,812	477	401	366	320	277
25,000–50,000	6,663	1,614	1,677	1,342	1,075	955	450	467	374	300	266
10,000–25,000	10,971	2,589	2,484	2,316	1,974	1,608	354	338	314	266	205
5,000–10,000	3,584	691	812	751	662	668	240	280	258	226	206
2,500–5,000	3,445	753	754	718	624	596	239	238	225	195	198
Under 2,500	3,701	858	767	865	656	555	228	203	227	172	149
Towns †	12,958	2,367	2,917	2,839	2,572	2,263	130	158	152	136	120
Institutions	8,891	1,880	1,998	1,890	1,504	1,619	...	...	...	...	...

* July 1 estimate based on 1940 census
† Includes all unincorporated territory

TABLE 7

Reported Early Cases and Case Rates per 100,000 Population by Population Group*
New York State (Exclusive of New York City)
1936–1940

Population Group	Cases						Case Rates				
	Total	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
Total	8,194	2,268	2,128	1,706	1,081	1,011	39	36	29	18	17
Places over											
250,000	1,744	658	439	226	209	212	73	49	25	23	24
50,000–250,000	1,655	415	437	415	200	188	41	43	41	20	19
25,000–50,000	638	181	164	136	85	72	50	46	38	24	20
10,000–25,000	1,283	334	351	290	155	153	46	48	39	21	20
5,000–10,000	377	76	108	79	62	52	26	37	27	21	16
2,500–5,000	397	111	93	96	48	49	35	29	30	15	16
Under 2,500	354	98	89	73	51	43	26	24	19	13	12
Towns †	1,381	308	341	333	216	183	17	18	18	11	10
Institutions	365	87	106	58	55	59	102	117	62	56	58

* July 1 estimate based on 1940 census
† Includes all unincorporated territory

The attack rates, shown by the number of early cases reported, (Table 7) followed the same trend as the prevalence rates. It is indicated that a reduction in newly acquired syphilis has occurred throughout the state.

SUMMARY AND CONCLUSIONS

The prevalence and trend of syphilis in New York State (exclusive of New York City) are discussed, based on 5 years' experience with a new method of securing morbidity reports. The data relative to prevalence of syphilis in this state are in agreement with those collected through survey methods, to the effect that syphilis is of greatest importance in young adults, and that the control of the disease during this time will ultimately reduce it in either extreme of life.

Distribution of cases according to the size of the communities from whence they were drawn, indicates that syphilis is more important in urban than in rural areas.

A progressive decline in the number of cases reported and in prevalence and incidence rates was observed during the 5 year period. It is believed that since this has occurred during a time in which case finding procedures have been more extensively applied than ever before, an actual reduction in syphilis in New York State is indicated.

The Use of Vital Records in the Reduction of Fetal, Infant, and Maternal Mortality*

Operative Procedures for Delivery and Their Effects on Neonatal and Maternal Mortality

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FOR some time the Bureau of Vital Records and Statistics of the Health Department of the City of New York has realized that the information from vital records can be instrumental, either directly or indirectly, in the reduction of fetal, infant, and maternal mortality, and it has been devoting a great deal of attention to making these vital records as informative as possible.

DIRECT APPROACH TO REDUCTION IN INFANT MORTALITY

So far, the department's direct efforts have been limited to the attempt to reduce the mortality among new-born infants immediately *after* discharge from the hospital. Because it is required that births be reported within two days, it is possible to place sufficient information from birth records in the hands of the visiting nurse so that she can arrange to make a home visit to any mother and child, not attended by a private physician, immediately after their return from the hospital. Every day the Statistical Division of the Bureau of Vital Records sends to each district health center a list of the births to mothers residing in that district as reported the previous day. These lists are prepared from index tabulating cards and give the name, home address, place of birth, color, and sex of each infant born alive, together with information regarding the number of this child in the family, its birth weight, and whether the case was that of a private practitioner or a general service (ward) case. From a study of these lists the visiting nurse in each district determines just which mothers and babies should be called upon and, should selection be necessary, preference is given to those whose records show that they are either first-born or were underweight at birth.

This service was started in October, 1940, and, whether as a result of it or not, the registration at the well baby clinics in the first two months of 1941 was more than 20 per cent greater than in the corresponding period of 1940.

INDIRECT APPROACH TO REDUCTION IN FETAL, INFANT, AND MATERNAL MORTALITY

Method of Study

In 1933 the New York Academy of Medicine published the results of a

* Read before the Vital Statistics Section of the American Public Health Association at the Seventieth Annual Meeting in Atlantic City, N. J., October 17, 1941.

survey of maternal mortality in New York City.[1] It was this courageous report that focused attention on the shortcomings in obstetrical practice in the city and led to the formation of special committees to study the problem in the medical societies of four of the five counties that comprise the City of New York. Subsequently additional committees were appointed by the medical societies in two counties to study the problem of fetal and neonatal mortality.

In order to function intelligently, these committees sought and obtained the collaboration of the Health Department. Since 1936, the Statistical Division of the Bureau of Vital Records has been sending to each committee each week a list of all the cases in which the committee is interested, together with photostatic copies of all birth and death certificates having a bearing on those cases. Thus, in the case of a maternal death, a committee studying maternal mortality receives a copy of: (1) the death certificate of the mother, (2) the birth certificate of the child (if born alive), or (2a) the fetal death (stillbirth) certificate (if the child was born dead), and (3) the death certificate of the child (if the child born alive died before its mother).

A committee studying fetal and neonatal mortality receives photostatic copies of: (1) the fetal death (stillbirth) certificate (if the child was born dead and the fetus had completed 28 weeks of gestation), (2) the death certificate (if the child was born alive and died before completing ten days of life), and (3) the birth certificate of any child described in the item immediately preceding.

The Confidential Medical Report

It was soon apparent that the information given on the certificates of birth and stillbirth in 1936 was of practically no value in shedding light on the causes that led to the death of an infant born alive or to the death of a fetus before birth. In an attempt to meet this lack of essential information, the senior author of this paper proposed that supplementary medical information for each live birth and fetal death be recorded in a confidential report on the back of the certificate. This proposal was accepted and in March, 1938, a confidential supplementary medical report, utilizing the backs of the birth and stillbirth certificate forms, first came into use in New York City and has been used ever since. It contained information on such questions as:

Period of gestation (in weeks)
Length of the child
Weight of the child
Complications of pregnancy, if any
Results of the serologic test for syphilis
Duration of labor
Operative procedures employed at delivery and the indications for such procedures

Later, another question was added: whether the mother was a private physician's patient or a general service (ward) case. These questions were formulated after consultations with members of the committees who also assisted in the preparation of the codes used in tabulating and analyzing the information derived from the reports. The medical profession has coöperated magnificently and on only few birth certificates is this confidential information lacking.

Tabulating Technics

In order to make the fullest use of the material thus made available, the obstetrical histories as given in the confidential medical reports on the backs of the live birth and fetal death certificates had to be correlated with the information from the certificates of death of (a) infants who died under one month of age, and (b) women who died from puerperal causes. To do this, two special sets of composite tabulating cards are prepared. The "neonatal mortality composite card" is obtained by

reproducing entirely the punch card recording the birth of each infant who dies during the first month of life, and adding to it certain pertinent information from the tabulating card recording that infant's death.

The "maternal mortality composite card" is obtained by reproducing entirely each punch card recording a puerperal death and adding to that information certain pertinent data from the tabulating card recording the live birth or fetal death associated with the mother's death. Whether the mother died undelivered or her death was associated with a live or dead birth, and, if delivered, the time interval between delivery and death are also indicated on the card.

In our research program we have been guided by the idea attributed to Dr. C. E. K. Mees, head of the Research Laboratories of the Eastman Kodak Company, in the September, 1941, issue of the *Reader's Digest* (page 71). Dr. Mees is quoted as saying: "The thing to do is to let the research man poke his inquisitive nose into some problem that fascinates him, and then follow it from fact to fact, no matter how far off the original track it leads." Acting on this principle we made a number of tabulations; these led to others; and the end is not yet in sight. All are prepared with the sole aim of shedding light on the causes of death among mothers and the babies they are bringing into the world. The results of the first studies of this material, based on the births and deaths occurring in 1939, were published in the *Bulletin* of the New York Academy of Medicine [2] and *The Child*.[3]

RECENT FINDINGS

The Sample

In 1940, 107,287 live births were reported in New York City. Of these, 101,141, or 94 per cent, occurred in hospitals; 99,005 were white and 8,282 were recorded as colored. The cards for the white births are tabulated in groups —white males to primiparous mothers, white females to primiparous mothers, white males to multiparous mothers, white females to multiparous mothers, etc. As it was not possible to complete the analysis of the data for all these groups in time for this paper, it was decided to base this report on a group for which the analysis had been completed, namely, first born white males. The "under-weights" were eliminated, since neonatal mortality in children with birth weights under 2,500 grams varies with the weight at birth.[3] Because of their peculiarities multiple births were also excluded with the result that the sample analyzed is limited to single white male live first births weighing 2,500 grams or more delivered in hospitals. Because of the special nature of the sample, readers are cautioned against drawing *general* conclusions from the findings here presented.

Use of Operative Procedures

Table 1 shows the frequency of operative or instrumental deliveries by type of institution in which birth occurred; municipal hospital, voluntary hospital, or proprietary hospital.* We find that 47 per cent of all the cases were delivered operatively, if episiotomy is not considered an operative procedure. Operative deliveries were most frequent in the voluntary hospitals where they were used in 50 per cent of the cases; not so common in the proprietary hospitals, with 45 per cent; and least frequent in the municipal hospitals, with 38 per cent. Low forceps was naturally the most frequent type of instrumental de-

* Municipal hospitals are financed by the city and are collectively managed by the Department of Hospitals for the benefit of the indigent poor.

Voluntary hospitals are individual institutions managed by philanthropic non-profit-seeking organizations receiving some financial assistance from the City.

Proprietary hospitals are individual institutions managed by profit-seeking organizations.

TABLE 1

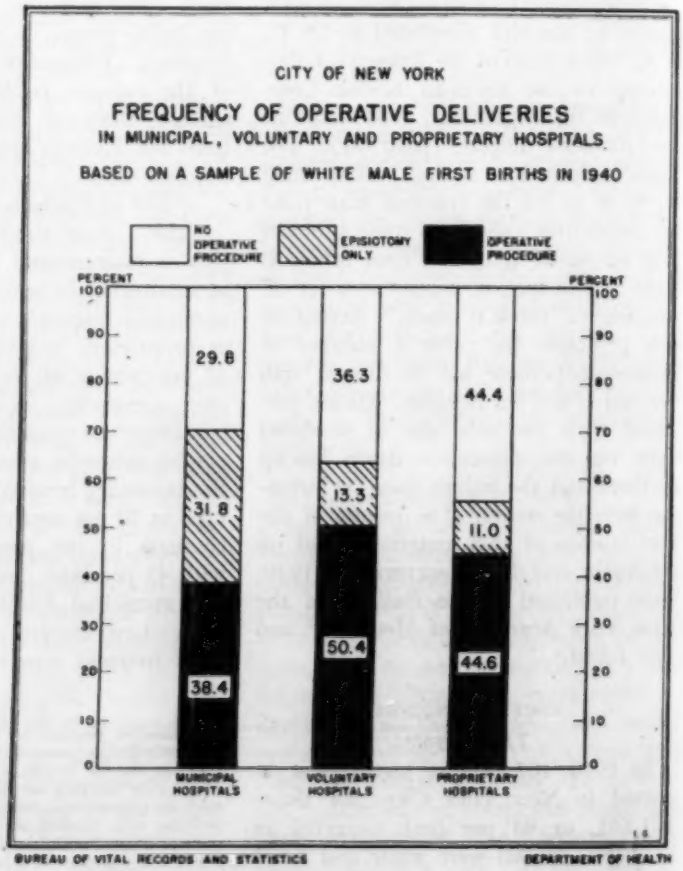
City of New York
*Operative Procedure Employed at Birth**
By Type of Institution
1940

Operative Procedure Used in Delivery	Number				Per cent			
		Type of Institution				Type of Institution		
	All Hospitals	Municipal	Voluntary	Proprietary	All Hospitals	Municipal	Voluntary	Proprietary
Total	20,479	1,899	11,375	7,205	100.0	100.0	100.0	100.0
No operative procedure	7,896	566	4,130	3,200	38.6	29.8	36.3	44.4
Episiotomy only	2,907	604	1,510	793	14.2	31.8	13.3	11.0
Low forceps	7,017	571	4,092	2,354	34.3	30.1	36.0	32.6
Mid forceps	1,545	87	955	503	7.5	4.6	8.4	7.0
High forceps	73	6	30	37	0.4	0.3	0.3	0.5
Version, no forceps	32	1	21	10	0.2	0.1	0.2	0.1
Version, with forceps	13	2	10	3	0.1	0.1	0.1	†
Breech extraction, no forceps	260	21	155	84	1.3	1.1	1.4	1.2
Breech extraction, with forceps	72	9	33	30	0.4	0.5	0.3	0.4
Cesarean section	662	32	439	191	3.2	1.7	3.9	2.7

* Special sample—single, white, male first births born alive in hospitals and weighing 2,500 grams or more
† Less than 0.05

CHART 1

Basic Data on Frequency of Operative Deliveries



livery. Mid-forceps and Cesarean sections were next in order of frequency. Basic data on this point are presented in Table 1 and Chart I.

The data from this same sample were next tabulated by type of operative procedure employed, subdivided according to the reported reason—namely, the complication of labor or delivery—for the use of the operative procedure. These results are shown in Tables 2, 3, and 4.

TABLE 2

City of New York
Complications of Labor or Delivery
*With Operative Procedures Employed at Birth**
1940

Complications of Labor or Delivery (Reason for Operative Procedure)	Total	Type of Operative Procedure							
		Episiotomy	Low Forceps	Mid Forceps	High Forceps	Version, with or without Forceps	Breech Extraction	Cesarean Section	No Operative Procedure
Total births	20,479	2,907	7,017	1,545	73	47	332	662	7,896
Prolonged labor	5,468	919	3,263	1,139	52	20	43	32	....
Elective, prophylaxis	4,859	1,869	2,791	80	3	9	106	1	....
Disproportion, dystocia	1,000	83	303	175	13	9	14	403	....
Fetal distress	660	16	509	108	4	4	17	2	....
Medical condition in mother	219	10	108	25	..	2	3	71	....
Breech presentation	151	..	..	..	..	3	148	..	....
Elderly primipara	127	4	11	5	..	..	1	106	....
Placenta praevia, premature separation	50	2	7	4	..	..	..	37	....
Previous abdominal operation	4	..	..	..	..	..	..	4	....
Other complications or not stated	45	4	25	9	1	..	..	6	....
No complications	7,896	..	..	..	..	..	..	..	7,896

* Special sample—single, white, male first births born alive in hospitals and weighing 2,500 grams or more

TABLE 3

City of New York
*Percentage Frequency of Each Operative Procedure Employed in Response to Various Complications of Labor and Delivery**
1940

Complications of Labor or Delivery (Reason for Operative Procedure)	Total	Type of Operative Procedure							
		Episiotomy	Low Forceps	Mid Forceps	High Forceps	Version, with or without Forceps	Breech Extraction	Cesarean Section	No Operative Procedure
Total births	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Prolonged labor	26.7	31.6	46.5	73.7	71.2	42.6	13.0	4.8	....
Elective, prophylaxis	23.7	64.3	39.8	5.2	4.1	19.1	31.9	0.2	....
Disproportion, dystocia	4.9	2.9	4.3	11.3	17.8	19.1	4.2	60.9	....
Fetal distress	3.2	0.6	7.3	7.0	5.5	8.5	5.1	0.3	....
Medical condition in mother	1.1	0.3	1.5	1.6	....	4.3	0.9	10.7	....
Breech presentation	0.7	....	....	....	....	6.4	44.6	....	....
Elderly primipara	0.6	0.1	0.2	0.3	....	....	0.3	16.0	....
Placenta praevia, premature separation	0.2	0.1	0.1	0.3	....	....	....	5.6	....
Previous abdominal operation	†	....	....	....	....	....	....	0.6	....
Other complications or not stated	0.2	0.1	0.4	0.6	1.4	....	....	0.9	....
No complications	38.6	....	....	....	....	....	....	....	100.0

* Special sample—single, white, male first births born alive in hospitals and weighing 2,500 grams or more
† Less than 0.05

TABLE 4

City of New York
*Percentage Frequency of Various Complications of Labor and Delivery Eliciting the Several Operative Procedures**
1940

Complications of Labor or Delivery (Reason for Operative Procedure)	Total	Type of Operative Procedure							
		Episiotomy Only	Low Forceps	Mid Forceps	High Forceps	Version, with or without Forceps	Breech Extraction	Cesarean Section	No Operative Procedure
Total births	100.0	14.2	34.3	7.5	0.4	0.2	1.6	3.2	38.6
Prolonged labor	100.0	16.8	59.7	20.8	1.0	0.4	0.8	0.6	....
Elective, prophylaxis	100.0	38.5	57.4	1.6	0.1	0.2	2.2	†	....
Disproportion, dystocia	100.0	8.3	30.3	17.5	1.3	0.9	1.4	40.3	....
Fetal distress	100.0	2.4	77.1	16.4	0.6	0.6	2.6	0.3	....
Medical condition in mother	100.0	4.6	49.3	11.4	....	0.9	1.4	32.4	....
Breech presentation	100.0	....	....	....	....	2.0	98.0	....	....
Elderly primipara	100.0	3.1	8.7	3.9	....	....	0.8	83.5	....
Placenta praevia, premature separation	100.0	4.0	14.0	8.0	....	....	....	74.0	....
Previous abdominal operation	100.0	....	....	....	....	....	....	100.0	....
Other complications or not stated	100.0	8.9	55.6	20.0	2.2	....	....	13.3	....
No complications	100.0	....	....	....	....	....	....	....	100.0

* Special sample—single, white, male first births born alive in hospitals and weighing 2,500 grams or more
† Less than 0.05

In Table 3, taking the total of each type of operative delivery as 100 per cent, we show the percentage frequency with which each of the various operative procedures was used as a response to the several complications of labor or delivery. From this table, we see that in 40 per cent of the cases in which low forceps were employed, they were applied because the doctor elected to do so and gave no other reason; in almost half of the cases they were applied because of prolonged labor; fetal distress and disproportion also were indications for the use of low forceps.

The complications most frequently indicating the use of mid-forceps and high forceps were: deep transverse arrest and persistent occiput posterior, prolonged second stage, and other forms of prolonged or arrested labor—all grouped under prolonged labor.

The four most frequent reasons given for performing Cesarean sections were: inadequate pelvis and oversized fetus—grouped under disproportion—elderly primipara, and some medical condition in the mother.

In Table 4 we have reversed the procedure of Table 3, and show the percentages of each complication of labor or delivery in which the various operative procedures were employed. In cases of placenta praevia with premature separation, for example, Cesarean section was employed, according to the reports, in 74 per cent, low forceps in 14 per cent, mid-forceps in 8 per cent, and episiotomy only in 4 per cent. Similarly, Cesarean section was the operation of choice in cases of inadequate pelvis (disproportion), with low forceps and mid-forceps following.

Neonatal Mortality

After learning the frequency and the reasons for each type of operative procedure, we were interested in finding if differences existed in neonatal and maternal mortality rates associated with each type of delivery. The results are shown in Table 5 and Chart II. Some

TABLE 5

City of New York
Neonatal and Maternal Deaths Associated with Various Types of Operative Procedure Employed at Birth†*
1940

Operative Procedure Used in Delivery	Number of Live Births	Neonatal Deaths		Maternal Deaths	
		Number	Rate per 1,000 Births	Number	Rate per 10,000 Births
Total	20,479	248	12	36	17
No operative procedure	7,896	60	8	4	5
Episiotomy only	2,907	18	6	4	14
Low forceps	7,017	83	12	9	13
Mid forceps	1,545	41	27	3	19
High forceps	73	7	96	..	..
Version, no forceps	32	4	125	1	313‡
Version, with forceps	15	4	267	..	..
Breech extraction, no forceps	260	10	38	4	154
Breech extraction, with forceps	72	6	83	..	..
Cesarean section	662	15	23	11	166

* Under one month
† Special sample—single, white, male first births born alive in hospitals and weighing 2,500 grams or more
‡ Based on only one death

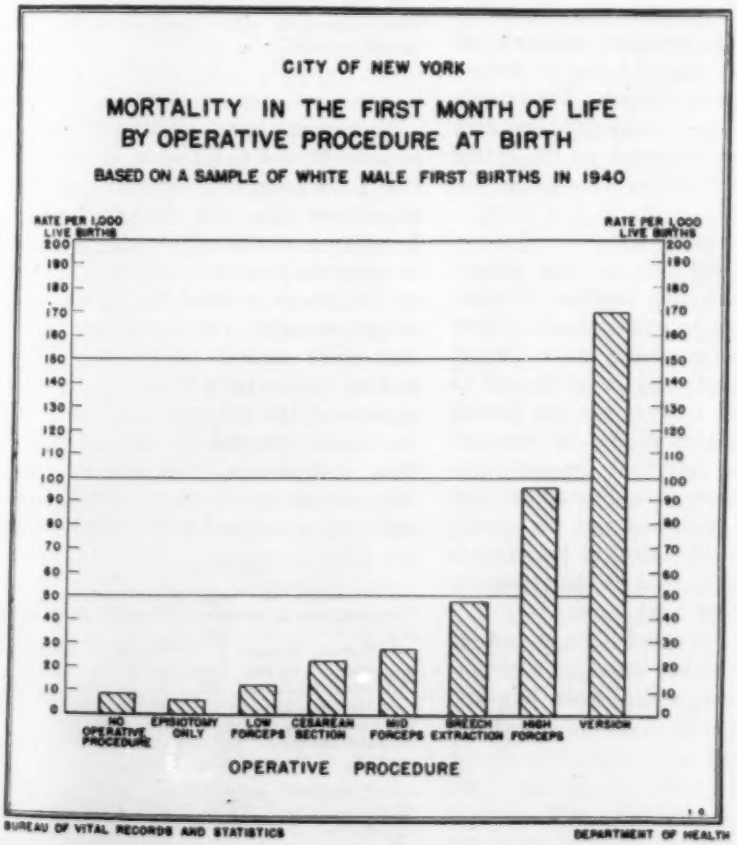


CHART 2
Neonatal Mortality

of the numbers are small, but there seems to be an indication that the lowest neonatal (under one month) mortality rate, 6 per 1,000 live births, occurred among children delivered when episiotomy only was employed. The group with no operative procedure was not far behind with 8, while a rate of 12 was found among those delivered by means of low forceps. The highest mortality rates were found in the groups delivered by version and breech extraction.

Maternal Mortality

While the number of maternal deaths associated with the births in this sample is small, it appears that a considerably higher maternal mortality rate followed Cesarean section and breech extraction than other forms of operative delivery.

It is entirely possible that the differences in both the neonatal and maternal mortality rates may be due to factors other than type of delivery. The reasons which lead to operative procedures may exert as much influence as the actual procedure employed, or even more.

SUMMARY

We have referred to the unique method of collecting medical information bearing on pregnancy and delivery which has been employed in the City of New York since early in 1938, and to the direct and indirect use the Health Department makes of this information. We have also described the close collaboration between the Bureau of Vital Records and Statistics and the special committees of the Medical Societies in four of the five counties that comprise the City of New York.

We have presented data regarding operative deliveries, based on a sample of 20,479 single, white, male, live first births in hospitals in the city in 1940, showing that:

1. In the voluntary hospitals some operative or instrumental procedure was used in half of the deliveries, and that the municipal hospitals reported the smallest percentage of operative deliveries.

2. The most frequently used operative or instrumental procedures were: low forceps, mid forceps, and Cesarean section.

3. Low and mid-forceps were usually applied because of some form of prolonged labor. The reasons given for the use of Cesarean section were: inadequate pelvis, oversize fetus, elderly primipara, and a medical condition in the mother.

4. Conversely, when some form of arrested labor or fetal distress was encountered, low or mid-forceps were applied. In case of disproportion, Cesarean section was the operation of choice.

5. Children delivered spontaneously, or when only an episiotomy was done, had the best chance of surviving the first month of life. This chance was small in cases of children delivered by version.

6. The highest maternal mortality rates were associated with Cesarean section and breech extraction.

CONCLUSION

No attempt has been made to analyze completely, nor to interpret the findings that have been made this far, but it is hoped that these and similar findings to be gathered as times goes on, may serve the medical profession in throwing light on the causes of fetal, infant, and maternal mortality. It is further hoped that, with such a tremendously large volume of data as is offered by the vital records of the City of New York, the Statistical Division of the Bureau of Vital Records and Statistics may assist the medical profession in reducing all mortality associated with child bearing.

REFERENCES

1. Committee on Public Health Relations, New York Academy of Medicine. *Maternal Mortality in New York City, 1930–1932.*

2. Duffield, Thomas J. A Review of the Maternity Statistics of New York City for the Year 1939. *Bull. New York Acad. Med.*, 16, 11:679–716, 1940.

3. Duffield, Thomas J., Parker, Sylvia L., and Baumgartner, L. Birth Weight and its Relation to Neonatal Mortality. *The Child*, 5, 5–6 (Nov.–Dec.), 1940, U. S. Department of Labor.

Health Education in Mexico*

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YOU have undoubtedly heard the story about the native and the professor who wanted to cross a swift river. I shall recall it to you: While in the canoe, the professor tried to amuse himself by questioning the native: "Pedro, my boy, do you know botany?" "No, señor," replied the paddler naively. "Oh! you have lost part of your precious life," replied the professor. And then: "My man, do you know astronomy?" "No, señor," answered Pedro very politely. "Oh! you have lost part of your precious life." Again: "Do you know biology?" "No, señor," was the humble answer, and another "Oh! you have lost a part of your precious life," was again and again the comment of our professor after the paddler had replied to questions about his knowledge. When the conversation was over Pedro continued paddling and kept thinking about how many parts of his precious life he had lost for not having learned the many queer things the savant suggested, until they arrived at the rapids and, notwithstanding Pedro's skill, the canoe overturned and into the river went Pedro and our professor. Our savant cried out for help and Pedro swimming asked: "Maestro, do you know swimming?" "No," yelled back the savant. "Then," shouted Pedro, "you have lost your whole precious life."

In our daily life and work we meet many Pedros and many savants interested only in queer little things; neglecting to learn the important practical facts about health and they drown on one of the many pitfalls in the river of life.

Wherever the remains of past civilizations are studied, there are found vestiges of activities carried on to improve the health of communities by sanitation of the environment and by personal hygiene. On studying our history, concepts of health education in Mexico can be traced, although time and again we learn that the progress of preventive medicine has been delayed by ignorance, prejudice, superstition, and pestilence.

Thus, I shall relate to you one of the episodes in the history of health education in Mexico which has impressed me most:

One hot day in August, 1804, the people of the Noble and Faithful City of Mexico were surprised to see a grand parade headed by the carriage of the Viceroy Iturrigaray. Following him were members of the Board of the King's Physicians, university and school professors, Sires of the Royal Audience, elders and members of the Supreme Courts, judges and noblemen. Rarely had the inhabitants of Mexico seen such a magnificent parade as that which took the road to the orphan asylum. There, in a huge hall, Dr. Alejandro Arboleya, member of the Board of King's Physicians, inoculated with Jenner's vaccinia the son of Viceroy Iturrigaray. But, why such elaborate and expensive display for such a routine

* Read before the Public Health Education Section of the American Public Health Association at the Seventieth Annual Meeting in Atlantic City, N. J., October 14, 1941.

matter as vaccination against smallpox? There was a good reason. Drs. Francisco Xavier de Balmis and Antonio Gutierrez, after several months of painstaking work on board two sailing vessels, had succeeded in bringing to Mexico the Jenner vaccinia. The people of the city, on being told by the local physicians that such a procedure as vaccination was not only false but dangerous, were almost incited to revolt and Viceroy Iturrigaray, being convinced that the procedure was based on truth, had his own child vaccinated by Dr. Arboleya. The news spread. Doctors swore that the child would die, but the people knew that the Viceroy would not have exposed his son to such a danger without being convinced of the safety of the vaccine. After that event they were convinced that the procedure was safe, and thousands of them were vaccinated against smallpox.

This drama carried out nearly 150 years ago by Viceroy Iturrigaray had all the features of modern health education—attracting the attention of the public, maintaining its interest, moving it to action, and at the end attaining its goal. Thus, health education in Mexico has developed and progressed with ups and downs under the auspices of governmental agencies. The task is not easy, indeed, it is a very hard one because Mexico, like many other Latin American countries, is essentially rural.

The rural population of Mexico, according to the census of 1930, is 65 per cent of the whole population, and in some states is 80 per cent. The number of illiterates is still high, about 55 per cent. Lack of culture and the prevalence of superstitions, medieval prejudices, and odd habits in rural communities make the solution of health problems extremely difficult. The somewhat inadequate biostatistics show that Mexico still pays a heavy toll in gastrointestinal disorders, respiratory infections, and parasitic diseases. In some regions of the country high mortality of infants and children is still registered and the number of mothers who are dying demands more widespread public health activities. Undernourishment, bad housing, inadequate water supplies, and sanitation with their inevitable accompaniment of malaria, dysenteries, hookworm disease, tuberculosis, and some other ills cloud the picture of health south of the border. Just imagine for a moment that all the economic, social, and medical problems which you face in some regions of Kentucky, of Georgia, of Tennessee, of Mississippi—even in the mountains of Pennsylvania—are spread over our entire country and you will have a clear picture of the work which we must perform to control morbidity and mortality. However, we are optimistic. On looking back on conditions prevailing 150 years ago, just before Viceroy Iturrigaray started to educate his people through a demonstration, we see that hygiene and sanitation did not exist and that public health has made progress since that time.

Returning again to biostatistics, the infant mortality rate, which in 1900 was 260 per 1,000 living births, was less than 125 in 1938. In 1922 the smallpox death rate was 83 per 100,000, and in 1940 it was 5; the typhus mortality rate in 1931 was 16, and last year was 9; tuberculosis killed 79 per 100,000 in 1922, while in 1938 it took only 55. The whooping cough mortality rate was 256 in 1922, and 153 in 1938. Malaria, water-borne diseases, milk-borne ills, housing, sanitation, and feeding are now better understood and much is being done to solve the difficulties associated with them. In 1900 the expectation of life of a newborn infant was only 24 years, while in 1936 it was 32 to 44 years, depending upon his birth place, or an average of approximately 34 years. This marks steady progress in the increase of the

span of life for a poor country like Mexico, with its heritage of Spanish individualism and Indian fatalism.

That the progress is due only to health education of the masses cannot be stated without reservation, for every one of us is aware that it is difficult to evaluate changes in health conditions and that there is no valid measurement for health education over a short span of life; but there is no doubt that health education in Mexico, as in many other countries, has substantially helped to improve conditions of life.

Indeed, the most obvious measurements of the progress and results attained by health education are: first, the declining mortality rate; second, the duration of life, and ours is longer every decade; and third, the best measure of all, is the extent to which people habitually look to the health and medical agencies for coöperation, help, and advice with relation to health and medical problems. I agree with Bauer and Hull [3] that, "When public health work grows and prospers side by side with the effective practice of preventive and curative medicine, we have evidence of a sound program of health education," and I shall add that, when the people themselves willingly give part of their income to support and increase the health and medical services of their community, and fight when these services are taken away, anybody can be sure that health education is in the very heart of the people.

Health education in the past was conveyed through the methods of trial and error, following the example of nature; in the present, the tendency is to apply the sound and scientific method of modern education. When public health work meant epidemic control its keystone was the physician. His work was immunization, quarantine, disinfection, and punishment of those who were reluctant to obey his orders. When later he was obliged to visit homes he found that the effectiveness of his work could be increased by having a nurse to assist him. The nurse has now replaced the old sanitary inspector with the viewpoint of the policeman, and her educational work has taken the place of the obsolete dictatorial procedures.

Let us examine two different pictures: one in the 18th century and one in 1941. It is the great square in Mexico City; during one of those hot days in May a man is tied to a scaffold. He is in rags, sweating and bleeding, all the women coming from the markets are throwing at him rotten eggs, ripe tomatoes, and all kinds of odds and ends. He was a milk vendor and was found watering his wares. He is paying the penalty imposed upon violators of the city's ordinances.

On the other hand, we are in 1941. Two girls dressed in a well known white uniform knock at the door of two houses in one of the streets of a native village. Smiling faces welcome them; children hang around them; and the girls start their daily work in the homes of those who need them most. They show the people how to bathe the children, how to prepare food; they immunize susceptibles against diseases and do the many things which a public health nurse does. That job is done from the Río Grande to the Guatemala border by about 1,500 nurses, an average of one for about every 12,000 inhabitants.

In 1900, scarcely half a dozen of the states supported nominal health services; in 1927, the Federal Department of Health had 30 health centers. Ten years later the number was 274, well scattered over the Republic. During the present year 450 health centers and 121 rural health units, with nearly 900 health officers and 1,500 nurses and other auxiliary personnel, endeavor to influence the lives and health of the men, women, and children of Mexico, a country of nearly 20,000,000 inhabitants.

The methods they use, the procedures

they follow, are the same as those which you advise. The channels through which health education is carried to the people of our old Mexico are also the same as yours: governmental and private agencies, the school, social welfare organizations, etc. Most of the work is carried on by government officials, using the same materials which you recommend, but on a smaller or larger scale; the printed matter, the lecture platform, the moving pictures, the radio, and the like. We have been following your steps and our technics are not different from yours for, even though the technics of preventive medicine and public health administration are subject to changes and interruptions, their methods, principles, and objectives are fundamentally alike all over the world, and I believe that it is worth while to tell something about our methods of approaching a people full of prejudices, social and religious superstitions, and well rooted personal habits.

Here a nurse is worried, for the chieftain in a village has forbidden her to vaccinate his people because the weather is too cold or too hot. She is chewing gum, waiting for her bus to take her back to headquarters, defeated. An urchin comes near her and for him she makes bubbles and threads with her chewing gum. The child is amused. Others come and watch her performance. A plan occurs to her: a Chiclet to everyone who lets her vaccinate him. A deal is made with the children and after six hours of exhausting work the whole child population and many adults are protected against smallpox, and another chieftain is convinced that the nurse is not trying to play a mischievous trick on his people. Miss Chewing Gum has in her armamentarium another means to put into action when the chance comes.

Over there, a health officer is refreshing himself in the river near a rural village. The mayor has ordered him to leave town, notwithstanding a severe outbreak of typhoid fever which is ravaging the place and its surroundings. He is using a cake of scented soap. The foam and the scent attract several little rascals who are watching him. He takes one of them into the water and soaps him. The child is delighted and runs to his hut to show his mother how nice he smells. The squaw comes out to the bank of the river and asks for a piece of that nice soap. "All right, if you allow me to protect you and your family against typhoid fever." The result of such an experience was that the officer had to order several boxes of soap to meet the demand for it in that small rural section, even against the will of its backward mayor.

Besides Miss Chewing Gum, Mr. Soap, Sir Water Supply, we have somebody else who has brought about a big change in communities which were indifferent before to preventive medicine. It is Medical Care. In many places people have never been healthy and to talk to them in terms of health was wasting time. To wake them up and to make them interested in health it was necessary to cure them first and allow them to experience the new sensation of being without the burden of disease. After that it is less difficult to approach them and instruct them how to avoid illness. In many communities it is through curative medicine that the practice of preventive medicine has been established during the last six years. In many rural zones, especially the "Ejidos," or agricultural villages which own their fields, the medical services are supported by the settlers themselves.

I agree with Kleinschmidt that at least in Mexico and in most Latin American countries preventive and curative medicine are inextricably interwoven. The merely hygienic aspects of the fight against malaria or hookworm or any other pestilence which is scourging our rural population cannot be

separated from the purely medical implications. Indeed, as Hydrick [4] and Turner [5] state, a treated patient is only a passive center of health propaganda, as also are his relatives and friends, but I would add that he can become a potential center of the most active health propaganda if we take advantage of his state of mind after he is rid of disease.

A man who has been cured, who for the first time is enjoying health, is willing to do anything you ask him to do, and from a passive tool of education he easily becomes an active instrument for health propaganda. If our systems of health education appear to be weak because we use curative methods, as we are obliged to do in the rural field, it is because we neglect to strengthen them by correlating and coördinating the ancient curative medicine with modern preventive efforts.

To do that, we must change our medical curricula and teach our future doctors and our nurses about the social and economic aspects of medicine. We must teach them that a patient is not an interesting specimen from the economic or scientific point of view, but a unit, a component of a grand complex called society. Then and only then, they will understand that there is only one rational aspect of medicine, the integral one to perform our duty faithfully.

The events of the past and the facts of the present demonstrate the need of being critical of our programs of education, and particularly of our plans for health education, to establish a sound understanding of the psychology of our people, and a careful self discipline for our own sake and for that of our brethren. In the meantime we must condemn the inner impulse to be defeated beforehand in our efforts to make an end to disease, war, and misery, and to increase the span of human life. Let us do so, and we shall learn to swim in the river of life and enjoy the swimming in a healthy long river, the life of a democratic and free America, in which we do not hesitate to keep our hopes for a better and a happier world.

REFERENCES

1. Granillo, Dr. R. Aspecto demográfico de los Estados Unidos Mexicanos. *Boletín de Salubridad e Higiene*, III, 4:437, D.S.P., México, 1940.

2. Bustamante, M. y Aldama, Alvaro. Principales censos de muerte en México. *Revista del Instituto de Salubridad y Enfermedades Tropicales*, México, I, 3:205–239 (Sept.), 1940.

3. Bauer and Hull. *Health Education of the Public*. Saunders, 1937.

4. Hydrick, J. L. *Intensive Rural Hygiene Work and Public Health Education, Batavia-Centrum, Java*. Netherlands, India, 1937.

5. Turner, C. E. Educating the Public for Health. *Illinois Health Messenger*, XII, 5:19 (Mar.), 1940.

Local Responsibility for Housing Control*

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MUCH of the emphasis on improving housing for low-income families has been placed recently on large scale, subsidized housing construction projects. Perhaps not enough attention has been paid to improving existing housing facilities, and to preventing the creation of additional slums and blighted areas. More rigid enforcement of existing and strengthened housing laws through mutual coöperation of all local agencies and departments can improve conditions materially in areas of poor housing.

Before substantial improvement of such areas can be accomplished, the problem must be considered from an economic viewpoint. Some time ago a letter was received from an official assigned to study the housing situation in his city. His letter began by saying: "Our Relief Department allows a maximum of $10 per month for rent, in our relief client's budget." The $10 a month place unquestionably seldom receives a coat of paint, plumbing repairs by a competent plumber, an earnest effort at rat extermination or rat proofing, heating plant repairs, or other essential maintenance services. The place is rented "as is," and the landlord frequently tells his tenants: "If you don't like it, you can move." The person of means can move without any great economic hardship. Low income groups, however, usually do not have funds to pay for moving, even if a more suitable place were available for the rent which they are able to pay.

Rental income should be sufficient to enable owners to maintain properties in a reasonable state of repair. Then, municipal departments should enforce requirements for proper maintenance, occupancy, and compliance with building, safety, and zoning laws.

It is generally agreed that housing must be subsidized before substantial improvements can be effected. Federal housing projects are most successful in providing almost ideal housing for low income groups. Municipalities cannot, however, depend upon the federal government for curing all housing ills.

Local control of housing involves three distinct phases, building and zoning regulation enforcement, maintenance supervision, and demolition.

CONTROL THROUGH BUILDING AND ZONING LAWS

In Milwaukee, it was realized that some control over the conversion of dwellings was essential. This control now involves the securing of an occupancy permit from the Building Inspector whenever there is a change in the type of use of a building. Before this permit is granted, the proposed occu-

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pancy must comply with the zoning, building, safety, and sanitation requirements of city and state codes.

The zoning laws are usually suggested and approved by the Board of Public Land Commissioners before they are enacted by the Common Council. The City Planner is the adviser to and the secretary of this board. Enforcement is by the Building Inspector who is assisted by the Police Department. Police officers post a notice on certain types of vacant buildings, stating that the building cannot be re-occupied without obtaining a permit from the Building Inspector.

City ordinances prohibit any department from issuing permits or licenses involving a new use of a building unless the requirements of the building and zoning laws are first met.

Improper zoning usually creates a problem for the Health Department. Placing too many buildings on a lot leads to crowded conditions which interfere with proper ventilation and light. Noisy, smoky, malodorous industries in the heart of a residential section usually create neighborhood nuisances. Zoning laws will gradually correct conditions existing now because of the lack of zoning control heretofore.

In 1939, at the suggestion of the Building Inspector, a minimum dwelling standards ordinance was passed. This applies to all new or converted buildings which are to be used for dwelling units. The ordinance prescribes minimum sizes of rooms, such as 160 square feet for living rooms, 120 square feet for the first bedroom and 100 square feet for each additional bedroom, and 60 square feet for kitchens.

The minimum dwelling unit must have a total of 280 square feet of floor area. Minimum sanitary equipment is a sink in each unit and one complete bath for each two units. No new light housekeeping units may be created, even in existing buildings or rooming houses, unless they meet these minimum requirements.

The ordinance prescribes reasonable minimum land areas per dwelling unit. Looking toward the future, this law will do much to eliminate dark, crowded, blighted areas from developing, when what are now new areas are eventually occupied by low income groups.

Blighted areas are developing around the outskirts of cities where building regulations are liberal, laxly enforced or nonexistent. Shacks, bungalow garages, and other makeshift dwellings are erected by the poor. Improperly constructed wells, poorly installed plumbing (if any), and insanitary privies add to the health hazards of poor housing.

Milwaukee county officials state that they were the first in the country to adopt a county-wide zoning law. The county is zoned for agricultural, residential, local business, commercial, light manufacturing, and industrial areas. All subdivision plats are suggested, and must be approved by, the County Planning Department. Zoning permits must be obtained from the county before construction can be started.

All townships within three miles of the Milwaukee city limits have enacted building laws which prohibit the erection of shacks or the use of bungalow garages for more than a limited period of time.

A state-wide well drilling code [1] requiring registration of well drillers, prescribing minimum construction standards, and requiring the filing of a well log and premise diagram, is doing much to eliminate unsafe wells where public supplies are not available. The construction of community wells for subdivisions not accessible to large public water supplies is being encouraged. A state-wide plumbing code is insuring sanitary plumbing installations and reasonably adequate private sewage disposal systems. The Milwaukee Metropolitan Sewerage Commission is pro-

viding sewerage and sewage disposal for a large part of the county. A city ordinance recently enacted, requiring connections with public sewer and water lines when they are available, and requiring sanitary construction and maintenance of privies where sewers are not accessible, will improve housing in outlying sections built before the enactment of county zoning and town building laws.

MAINTENANCE SUPERVISION

After a building is constructed or remodeled in accordance with building and zoning requirements and is occupied, the municipality's responsibility is to insure proper maintenance.[2] Routine maintenance is largely a sanitation problem consisting of insuring cleanliness, proper heating, vermin control, and freedom from overcrowding. This, in Milwaukee, is a Health Department function.

Occupancy record cards were prepared for each of the 2,500 licensed rooming houses in the city. Rooming house managers are required to keep a copy of this card posted. Each room or apartment is listed by number. The number of persons allowed in each room or unit is specified. Rooms which do not meet the size and window area requirements of the rooming house ordinance are not listed and are not to be rented. Third floor rooms with inadequate fire exits are not licensed or listed, although enforcement is by the Building Inspector. Crowding is limited to the rather liberal requirements of the old rooming house ordinance. The "Minimum Dwelling Standards Ordinance" previously mentioned, is enforced in rooming houses by specifying whether a room or unit may be used for light housekeeping or whether it must be used for sleeping only. No excuse by an operator for installing cooking stoves in sleeping rooms, for permitting overcrowding, or for renting unlicensed rooms, contrary to the posted card is accepted.

Health Department inspectors report the inadequacy of fire exits, defective wiring, and similar conditions to the Building Inspector. Illegal plumbing is referred to the Plumbing Inspection Department. Orders are issued directly by Health Department inspectors to correct insanitary plumbing. Copies are sent to the Plumbing Inspector so that he may be sure the work is done under permit. Plumbing hazard surveys in all buildings are made a part of general inspection by Health Department inspectors.

Simple cards are used by inspectors on all routine housing inspections. The cards list all general items relating to building maintenance. Items coming within ordinance requirements are checked "O.K." or "Not O.K." Whenever checked "Not O.K.," orders must accompany the cards. If some item under Building or Plumbing Inspection Department is checked "Not O.K.," form notices are forwarded to those departments.

RELIEF AND WELFARE AGENCIES COÖPERATE

In routine maintenance, the coöperation of relief and welfare agencies is especially valuable. The Milwaukee County Department of Public Assistance insists that their clients occupy fit housing units.[3] Rents up to $40 per month, for large families, are occasionally allowed. Quarters for their clients are rated by their housing department according to their scale. Deductions are made for deficiencies in sanitary facilities, room size, window area, general condition of the building, heating, and the like. Places rating from 85 per cent to 100 per cent are allowed full rent according to their scale. Deductions are made for places rating from 65 per cent to 85 per cent. No place rating below 65 per cent will be rented but is referred to the Health and the Building

Inspection Departments for investigation. They refuse to rent unlicensed rooms in rooming houses.

Insanitary, vermin infested, single family dwellings are also reported to the Health Department. When the Health Department does not have the legal power to order corrections, the quarters may be classed as "unfit for use." The Department of Public Assistance then requires the owner to make the necessary repairs or rent is withheld. Relief and welfare agencies have coöperated by providing furniture to enable families to move from crowded, furnished quarters in multiple family units to more desirable unfurnished, approved dwellings.

The Department of Public Assistance employs a housekeeping instructor who teaches untidy tenants all they can absorb to improve their housekeeping methods, including technic of vermin extermination in private buildings where the Health Department cannot require the owner to exterminate.

The Relief Department's success is due largely to their willingness to pay reasonably adequate rent, directly to the landlord. As the owner knows that his rent will be paid promptly each month, relief clients are, in this respect, more desirable than other low-income families.

SOCIAL CENTERS AND SOCIAL AGENCIES

Milwaukee's extensive system of playgrounds, recreation and social centers can be considered a factor in improving the environment in some areas. Within recent years, the number of playgrounds has been increased from 24 to 80. Organized playground activities assist in providing healthful recreation for the children in the crowded and blighted areas. The social center programs, besides providing the usual recreation, offer facilities for special evening activities for young people from homes where proper quarters for entertainment are not available. These activities are more extensive in areas where juvenile court records show the greatest percentage of minor delinquency.

The social agencies take an active interest in housing. For more than a year, the Housing Committee of the Council of Social Agencies has been studying housing problems from all angles.

CONDEMNATION AND DEMOLITION

Before orders are issued to correct conditions in buildings in poor structural condition, the Building Inspector is requested to determine whether the building is subject to condemnation.

Although Milwaukee's tenement law, enforced by the Health Department, contains the familiar condemnation section, with provision for condemnation placards, this clause has not been used for several years. Condemnation is a Building Department duty.

When old sheds, barns, and abandoned buildings are found by Health Department inspectors to be rat harborages, the Building Department checks to determine whether they may be condemned. In the last 12 year period, 7,337 buildings of all kinds were condemned by the Building Inspector and subsequently razed. Many of these were old sheds and barns, cutting off light and air from living quarters and providing rat harborage. In the condemned and razed buildings were 4,155 dwelling units that were unfit for use.

Much of this condemnation was during depression years when one would expect little rebuilding. Records for the years 1935 to 1937 inclusive show buildings razed assessed at $469,000. Building permits show new construction on these lots to have a value of $3,546,000. Contrary to the general belief, the city's assessable property values were increased rather than decreased as a result of condemnation.

Condemnation proceedings have a

good effect on general building maintenance. Undoubtedly the number of buildings condemned would have been substantially greater if owners had not realized that they must keep buildings repaired or tear them down.

WPA real property surveys have been made in Milwaukee as in many other cities. Their records show that according to their standards an average of 13.8 per cent of the buildings in 202 other cities are unfit for use. Their report for Milwaukee shows 0.7 per cent of the buildings as unfit for use.[4, 5]

It is reported that when federal authorities studied Milwaukee housing conditions, they agreed that there was no single area that should be cleared to permit the development of a housing project. The one housing project of 518 units in the city of Milwaukee, built under PWA, is located in an outlying area. Early federal housing requirements, making certain minimum incomes mandatory, and placing the rent beyond the means of the poor, have done much to discourage further federal housing projects in the city.

There is no housing authority in Milwaukee, although state laws permit the creation of one. By coöperation, the planning, building, health, relief, social center, and welfare agencies in Milwaukee have made progress toward improving housing.

City health, building, planning, and tax departments are coöperating with the ward alderman in a study of housing conditions and factors in what is probably the most blighted section of the city, the colored district. These departments are also coöperating with the Wisconsin Anti-Tuberculosis Association in their large scale intensive tuberculosis study of the colored people. Possibly the results of this work will be conclusive enough to warrant prompt public action. This may be an area for large scale demolition and a public housing project.

"Neighborhood Re-development Corporations,"[6, 7] similar to those being developed in some other states, might also prove successful in reclaiming certain blighted areas.

Difficulty in obtaining loans for extensive improvement of and for remodeling older buildings is one factor hindering progress. Liberalization of federal lending agencies' policies or the creation of local public loan funds would do much to improve living conditions in many older buildings. Public or subsidized privately built housing on vacant, city owned property, even though large areas for large, complete developments are not presently available, might be desirable in certain districts.

Landlords should do more to encourage tenants to make repairs, do painting and other maintenance. Too many tenants in low-cost housing fear an increase in rent if their quarters or premises "look too good."

Perhaps, with the present emergency, progress in improving housing will be retarded. Defense booms should not necessitate lowering standards too far. Public and private agencies should look forward to utilizing much of our national energy and resources after the emergency to building, reconstructing, and improving housing. In such programs improvements for existing buildings should not be overlooked because of concentration on new projects alone.

Health departments, while they cannot and should not expect to do the whole job, can assume a position of leadership in encouraging coöperation between all interested departments and agencies in the important task of providing improved housing in the communities they serve.

REFERENCES

1. *Wisconsin Well Construction Code*, State Board of Health, Madison, Wisconsin.
2. Senn, C. L. Procedure for the Maintenance of

Housing Standards in Milwaukee. *Pub. Health Rep.*, 56:189–197 (Jan. 31), 1941.

3. Glassberg, Benjamin. How Can a Department of Public Assistance Secure Improved Housing for Client Families? *Publ. No. N-126*, National Association of Housing Officials (July), 1940.

4. Gurda, Leon M. *Report of Building Inspector to Mayor Zeidler on Housing* (July), 1941.

5. *WPA Real Property Survey Report* (Milwaukee).

6. Stone, Peter A., and Denton, R. Harold. Toward More Housing, *Monograph No. 8*. Temporary National Economic Committee. U. S. Govt. Printing Office, 1941.

7. Hoben, Edmond H. Rehabilitation of Blighted Urban Area. *Public Management*, 23, 2:35–42 (Feb.), 1941.

St. Louis Auditorium, Meeting Headquarters for the Seventy-first Annual Meeting of the A.P.H.A.

Epidemiology of Lye Poisoning in the United States

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IN 1927, culminating the years of continuous struggle of Dr. Chevalier Jackson, a national law was enacted requiring the label "poison" to be placed on all commercial products containing lye and other caustic chemicals. In spite of similar laws enacted by the various states before and after this date, burns due to lye ingestion with resultant esophageal strictures continue to be a serious public health problem. Thus Vinson (1927) reported that 102 of the 186 esophageal strictures seen at the Mayo Clinic were due to the ingestion of lye. Taylor reports 53 lye poisoning cases in Pennsylvania for the year 1934. He also points out that many new caustic preparations have been placed on the market since the Federal Caustic Act was enacted—such household helps as drain pipe cleaners, paint brush cleaner, and paint remover. However, his data indicate that in spite of these new preparations, and increased advertising, lye cases have been reduced somewhat in number.

Martin and Arena (1939) reported a study of 48 cases of esophageal strictures seen at Duke University Hospital in the preceding eight years. It is evident from their report that lye ingestion continues to be an important source of esophageal strictures. Legislation has failed to eliminate this problem. A part of the difficulty arises from the fact that the Federal Caustic Poison Act (1927) in referring to lye defines dangerous caustic or corrosive substances as any containing 10 per cent or more of sodium or potassium hydroxide. Products used for household purposes containing such amounts of lye must be labeled poison. Products containing less than 10 per cent lye do not come under the Act.

Lye poisoning is not one of the diseases which is required by law to be reported. A number of reports of lye poisoning are scattered throughout the literature, but fail to give an adequate picture of the extent of the problem in the United States. The present study has attempted to gather these data in order to form a basis for rational preventive procedures.

METHODS

An attempt was first made to ascertain lye ingestion morbidity and mortality from records of the country's 48 state health departments. Practically no detailed information was secured from this source in view of the fact that, although lye poisoning is a reportable entity as a cause of death, in state summaries it is included under the general heading "acute accidental poisoning by solids or liquids." Deaths due to lye ingestion are usually not reported as such but grouped as "accidental

poisoning" or merely "stricture of the esophagus." Frequently no mention of causative agent is given. Lye poisoning morbidity is not required by law to be reported to the health authorities.

Inasmuch as state vital statistics records provided such a paucity of data, it was decided to send questionnaires to a number of hospitals in each state. Letters were written to four or five or more of the larger and more prominent hospitals in each state. They were requested to send data on the total number of lye cases treated each year, together with the total hospital admissions. Data were also requested upon the race, sex, age, and financial status of the patient while in the hospital. The larger and more prominent general hospitals only were questioned, because it was felt they would furnish more data, their records would be more available, and it appeared possible that lye stricture cases would gravitate to them. It is recognized that the hospital samples and data are not entirely representative inasmuch as small hospitals, due to the inadequacy of their records, were not included in the study. It was thought that case duplication might be a complicating factor if numerous small hospitals were also included in the study. The hospitals responded admirably, and some data were received from most of them. Our data are admittedly incomplete both in numbers and desired detail. To our knowledge, however, they represent the first attempt to study the problem on a nation-wide scale.

RESULTS

Distribution of Lye Poisoning in the United States

A total of 1,334 cases of lye poisoning were reported in a total of 9,184,055 hospital admissions by the 181 hospitals during 1914 to 1939, inclusive. Therefore, for the 181 hospitals as a whole over the period studied, lye poisoning accounted for 14.5 per 100,000 of the hospital admissions. The year in which the lye poisoning occurred was given in 1,031 of the 1,334 cases reported. They are tabulated in Table 1. A casual inspection of this table suggests a gradual increase in cases. Whether or not this is real cannot be stated, as the yearly admission figures for the hospitals reporting these cases are not available. Part of the increase in reported cases is no doubt due to improvement in hospital records. It may also be due in part to increased bed capacity of some of the hospitals and to the trend toward hospitalization in the United States. It is apparent, however, that the Federal Statute enacted in 1927 did not eliminate lye poisoning. The average yearly number of cases reported by the hospitals in the study group from 1920 to 1927 was 22, while from 1928 to 1939 it was 67. There were 303 lye cases reported without information on the year of their occurrence. Whether or not these cases had a peculiar time distribution which would affect the trend in Table 1 is unknown.

TABLE 1

Cases of Lye Poisoning Reported by the 181 Hospitals Coöperating in the Study

1914	1	1927	27
1915	1	1928	29
1916	10	1929	36
1917	12	1930	42
1918	14	1931	59
1919	12	1932	55
1920	18	1933	61
1921	19	1934	83
1922	19	1935	81
1923	18	1936	107
1924	23	1937	103
1925	29	1938	85
1926	24	1939	63

During the period 1914–1939 the 181 hospitals included in this study admitted 1,334 cases of lye poisoning among a total of 9,184,055 hospital admissions. In the year 1939 there were 9,879,244

hospital admissions in the United States. If the proportion of lye poisoning cases to the hospital admissions in 1939 remained the same as it was during 1914 to 1939 it follows that in 1939 there were at least 1,430 new cases of lye poisoning in the United States. However, since our study included data only from general hospitals, whereas the total hospital admission for 1939 includes hospitals for the insane and tuberculous, it is very likely that the total cases of lye poisoning would be less than 1,430. These figures represent only those seeking hospital care. There are no doubt many cases which did not come to the hospital but were treated by physicians in their offices.

The geographic distribution of the cases reported by the 181 hospitals included in this study is shown in Table 2. On the basis of experience in these institutions, hospital admission rate for lye poisoning cases per 100,000 patients is given for each state. The State of Utah had a rate of 411.8 cases of lye poisoning per 100,000 hospital admissions. The data from this state were too few, however, to be of any significance. Study of Table 2 shows that, except for the District of Columbia with a rate of 111.7, the southern states Tennessee, North Carolina, Florida, South Carolina, and Georgia have the highest rates (61.4 to 85.9 per 100,000 hospital patients). On the other hand, Mississippi with a rate of 8.0, and Louisiana with 13.7, are typically southern states with low rates.

The hospitals queried in 7 states—Rhode Island, Vermont New Hampshire, North and South Dakota, Nevada, and New Mexico—did not report a single case of lye poisoning in a total of 449,886 hospital admissions (Map I).

Pennsylvania reported the greatest number of lye cases, 283. As they were distributed among 1,681,711 hospital patients, the lye poisoning rate was only 16.0 per 100,000. It is quite possible that Pennsylvania's rate as well as the rates of other states, with physi-

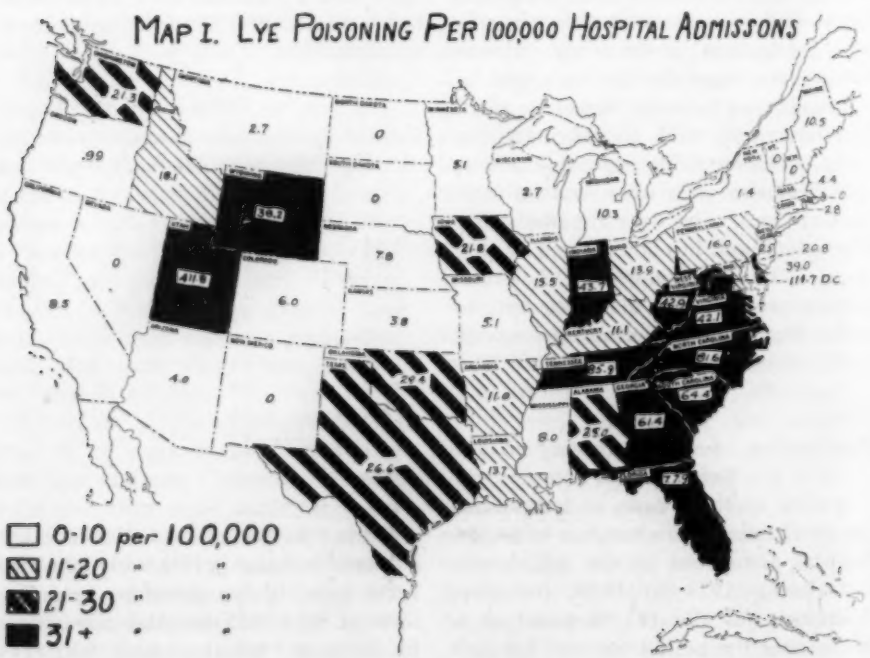

TABLE 2

Number of Lye Poisoned Cases Reported by the 181 Questionnaired Hospitals in 48 States and the District of Columbia from 1914 to 1939

State	Number of Lye Cases in Hospitals	Total Number Hospital Admissions	Lye Cases per 100,000 Hospital Admissions	Adjusted Lye Poisoning Rate
Utah	3	679	411.8	144.1
District of Columbia	95	85,950	111.7	111.7
Tennessee	35	40,782	85.9	20.6
North Carolina	60	73,391	81.6	20.4
Florida	67	85,961	77.9	21.8
South Carolina	54	82,347	64.4	14.1
Georgia	43	70,058	61.4	15.4
Indiana	14	31,910	43.7	12.7
West Virginia	3	7,149	42.9	13.3
Virginia	32	76,084	42.1	12.2
Delaware	16	41,283	39.0	15.6
Wyoming	20	52,319	38.2	15.7
Oklahoma	64	218,397	29.4	5.9
Texas	33	124,081	26.6	6.9
Alabama	12	48,458	25.0	5.0
Iowa	82	377,033	21.8	7.2
Washington	1	4,465	21.3	9.3
Maryland	18	86,610	20.8	8.3
Idaho	1	5,500	18.1	7.4
Pennsylvania	283	1,681,711	16.0	5.6
Illinois	75	488,066	15.3	5.7
Ohio	71	511,498	13.9	4.2
Louisiana	9	65,275	13.7	5.6
Kentucky	21	189,364	11.1	2.3
Arkansas	2	17,185	11.0	1.7
Maine	6	56,733	10.5	3.6
Michigan	78	755,308	10.3	3.6
California	28	330,450	8.5	3.5
Mississippi	2	25,075	8.0	1.7
Nebraska	4	50,812	7.8	2.1
Colorado	9	147,750	6.0	2.9
Missouri	14	273,724	5.1	1.6
Minnesota	18	336,251	5.1	2.4
Massachusetts	28	640,969	4.4	1.9
Arizona	1	25,100	4.0	1.7
Kansas	3	79,700	3.8	1.2
Connecticut	3	107,731	2.8	1.2
Wisconsin	10	365,616	2.7	1.1
Montana	2	72,825	2.7	1.4
New Jersey	2	77,931	2.5	0.9
New York	11	799,452	1.4	0.6
Oregon	1	103,286	0.99	0.4
Rhode Island	0	57,051	0.0	0.0
Vermont	0	129,208	0.0	0.0
New Hampshire	0	58,923	0.0	0.0
South Dakota	0	27,934	0.0	0.0
North Dakota	0	127,315	0.0	0.0
Nevada	0	22,983	0.0	0.0
New Mexico	0	26,472	0.0	0.0

cians and hospitals noted for the care of esophageal obstructions, is unduly great due to influx of patients to these centers. The data furnished by the hospitals unfortunately were not sufficiently detailed to permit us to allocate patients to place of origin. Hence it is impossible to estimate the effect of this factor on the lye poisoning rates of the various states.

It is perhaps somewhat illogical to calculate lye poisoning rates upon hospital admission rates. The hospitalization rate varies greatly from state to state. For example, in Washington, D. C., the yearly hospitalization rate is 19 per cent of its total population, in Georgia it is 5 per cent. It is evident that such great variations in hospital rates in part, at least, indicate that there is a tendency in certain areas to go to the hospital for many illnesses

rather than to remain at home. For certain serious conditions such as operations and lye strictures, it is quite likely that hospitalization rates are rather uniform throughout the country. Variations in the general hospitalization rate influence greatly the ratio of lye poisoning admissions to total admissions. Thus, if the southern states have a low per capita general hospitalization rate, yet if all the lye poisoning cases go to the hospital the lye poisoning admission rate would be relatively high. On the other hand, a state with a high general hospitalization rate would have a correspondingly lower ration of lye poisoning admissions to general admissions.

A correction was therefore made for the variation in general hospitalization rates in the several states. This was done by multiplying the hospital admission rate * of the state by the lye poisoning admissions rate. Thus states which had a high lye poisoning admissions rate due to the fact that the general hospital admission rate was low, showed a reduction in the final lye poisoning rate. For example, in North Carolina the lye poisoning cases admitted to the hospitals queried represented 81.6 per 100,000 of hospital admissions. Now North Carolina has a relatively low general hospitalization rate which in turn results in relatively higher lye poisoning rates. The adjusted lye poisoning rate for North Carolina becomes 20.4. The adjusted rates for the various states are shown in Table 2. This correction in general resulted in a reduction in the lye poisoning rate in southern states with a low general hospital admissions rate. Even with this correction the southern states still showed the highest lye poisoning rates.

Grouping of the lye poisoning into the generally used nine divisions of the United States further emphasizes the more common prevalence of this condition in the South (Table 3).

TABLE 3

Hospital Admission Ratio for Lye Poisoning per 100,000 General Hospital Admissions in Nine Areas

	Cases
New England States	2.4
Pacific States	6.8
West North Central States	9.3
Mountain States	10.1
East North Central States	11.1
Mid Atlantic States	11.6
East South Central States	23.1
West South Central States	25.4
South Atlantic States	34.9

RACE

There were only 349 cases upon which data were available as to age, race, and sex (Table 4). A total of 249 cases were white (71.6 per cent), and 100 (28.4 per cent) were colored. Inasmuch as the Negro race constitutes approximately 12 per cent of the total population in the United States, and yet appears to account for 28.4 per cent of the lye poisoning cases, it is apparent that this condition is more common among them than among the whites. This is especially apparent if one compares the ratio of lye poisoning reported among white and Negro children under 5 years of age (Table 4). In this particular group, 61 per cent of the cases occurred in white children, and 39 per cent in Negro children. In other words, it was 4 times as common in Negro children as in white children when the racial populations are taken into consideration. Ignorance, crowded living conditions, and carelessness are no doubt factors in the high Negro rate. Another factor responsible for the high Negro rate is their rural distribution.

* The hospital admission rate of the District of Columbia was 0.19. Since this hospital admission rate was the highest encountered, it was given the value of 1.0 for computation of the adjusted lye poisoning rate, and the other states' calculations were made accordingly.

AGE

Lye poisoning is 2 to 3 times as prevalent among rural persons as urban inhabitants. This is largely due to the habits of house cleaning and soap making of rural southern inhabitants.

Our figures indicate that the greatest percentage of the lye poisoning in both races occurs in the group under 5 years of age. Sixty-five per cent of Negro cases occurred in children under 5 years of age. In the whites, on the contrary, only 41 per cent occurred in children under 5 years of age (Table 4). Two possible explanations are suggested both of which may play a rôle in this age distribution of lye poisoning. The amount of lye swallowed by Negro children may be greater than that usually swallowed by white children and therefore medical and hospital care are sought at once. Among both the whites and Negroes there may be instances where the amount of lye swallowed is so small that hospitalization is not immediately necessary. Hospitalization may therefore come a number of years later due to a slowly progressive stricture. In such instances the case might be classified under the age of onset rather than the age at which the lye was ingested. In fact a number of our records indicate the lye stricture for which the patient was hospitalized dates to lye ingestion some years previously. A second possibility accounting for the higher lye poisoning incidence in whites in later life is the more common use of this material for suicidal purposes by the white race.

An analysis of the age incidence of lye poisoning in the 0–4 age group demonstrates that children under 1 year of age seldom are affected. One and 2 year olds are the ones most commonly poisoned, although all ages through the 5–9 year group furnish numerous cases. The frequency of attack then falls off until the 20–24 year age group is reached. Beginning at this age and extending through the next 40 years there is a continuous moderate amount of lye poisoning, especially among the whites. This increase in lye poisoning in adults may in part be due to late manifestations of lye poisoning incurred in childhood. Our data, however, indicate that a considerable amount originates in adults and to a large extent as a result of attempted suicides.

There were 60 persons over 12 years of age whose history gave the method of poisoning. In only 3 instances, 5 per cent was "accidental" definitely given as the cause of lye ingestion. There were 5 cases which were called "recent" and possibly all of these 5 could have been accidental—though this is not probable. Should one consider, however, all of these "recent" cases due to accidental cause, even then lye accidents by adults, in this case over 12 years of age, would amount to

TABLE 4

Distribution of Lye Poisoning by Age, Sex, and Race

Age		Under 1	1	2	3	4	0–4	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55–64	65+	Adult	Infant	Under 4	Total
White	Male	0	16	13	10	11	50	6	3	2	7	10	14	11	4	2	7	0	4	120
	Female	2	18	20	4	3	47	7	2	15	14	14	9	7	7	2	4	1	0	129
	Total	2	34	33	14	14	97	13	5	17	21	24	23	18	11	4	11	1	4	249
Negro	Male	1	4	12	7	5	29	7	4	1	1	3	2	1	0	0	3	0	1	53
	Female	0	14	11	7	1	33	1	1	1	2	3	3	2	0	0	0	0	1	47
	Total	1	18	23	14	6	62	8	5	2	3	7	4	3	0	0	3	0	2	100
Total		3	52	56	28	20	159	21	10	19	24	31	28	21	11	4	14	1	6	349

only 13.3 per cent—quite different from the 100 per cent accidental ratio found in the study of lye cases in children. To sum up the adult lye poisoning cases we find 66.7 per cent of them were due to suicide, 20 per cent were poisoned as children, and possibly 13.3 per cent were accidentally poisoned as adults (Table 5). In the study of adult cases (over 12 years of age) at Duke Hospital, where a more careful investigation could be made of the method of poisoning (but with the disadvantage of having far fewer cases), it was found that 18.2 per cent of adults had taken lye by accident as an adult, 45.4 per cent had taken lye by accident as a child, and 36.4 per cent used lye with suicidal intent (Table 6).

TABLE 5

Summary of Accidental and Suicidal Lye Poisonings in Persons Over Twelve Years of Age

Reason for Poisoning or Time When Poisoned	*No. of Cases*	*Per cent of Total*	
Suicide	40	66.7	
Poisoned "when child"	9	15.0	20.0% as children
"Old" cases	3	5.0	
"Recent" cases	5	8.3	13.3% probably accidental
Poisoned by "accident"	3	5.0	

TABLE 6

Analysis of Eleven Lye Cases at Duke University Hospital in Persons Over Twelve Years of Age

Reason for Poisoning or Time When Poisoned	*No. of Cases*	*Per cent of Total*
Poisoned "when child"	5	45.5
Suicide	4	36.4
Poisoned by "accident"	2	18.2

A total of 40 instances of suicide by lye ingestion were reported. Thirty-eight (95.0 per cent) of the 40 suicide cases were white, 2 (5.0 per cent) colored. White females were responsible for 22 (55.0 per cent) of the suicides, white males for 16 (45.0 per cent), colored females and males each responsible for 1 (2.5 per cent). Since lye is a substance used more often by the poorer classes, it is not surprising that 70 per cent of these suicidal cases entered the hospitals as charity patients, while only 14.6 per cent were private patients. The financial status of 15.4 per cent of the patients was not given.

SEX

Lye poisoning as reported was slightly more common among white females than males and more common in Negro males than among Negro females. Our data show that among the whites, 48.2 per cent of the cases were males and 51.8 per cent females, among the Negroes 53.0 per cent were males and 47.0 females. It is impossible to state why the rate for white males should be less than that for the females while among the Negroes the males had a greater lye poisoning rate than the females. The difference in lye poisoning rates of the sexes is very small, however, and more data are needed before any significance can be attributed to these apparent differences. One might have expected a higher rate among the females than the males inasmuch as the former spend more time in the home and theoretically should have a greater exposure to accidental ingestion. This may be balanced by the fact the females usually prepare the lye for use, are familiar with it, and hence avoid its accidental ingestion. Study of the incidence of lye poisoning among children under 5 (Table 4) also indicates no appreciable sex difference.

LYE ACCIDENTS

All the cases of lye poisoning in our series can be placed into two groups: accidental and intentional. The former group includes persons of all ages who

by accident ingested lye. The latter group, taking lye intentionally, were attempting suicide. This latter group is composed almost exclusively of adults.

Accidental lye poisoning was frequently due to ingestion of the powdered lye mistaken for salt or sugar. Even more common was the drinking of lye solutions which were mistaken for milk or sugar water. Classification of 53 cases upon which data concerning the type of material ingested were available indicates that 45.3 per cent of the patients had swallowed lye solution; 24.5 per cent had ingested powdered lye; 30.2 per cent were merely stated to have "swallowed lye."

The following excerpts from lye poisoning case histories indicate how the accident took place.

Powdered Lye:

"Lid of lye can put in mouth."
"Spoon containing lye put in mouth."
"Pellets of lye swallowed."
"Picked up lye can and started eating contents."

Lye Solution:

"Solution mistaken for drinking water."
"On wash day."
"Drank 'sugar water' from glass which once contained lye."
"Solution of lye and water put on potato and eaten."

Our data and a review of the literature show that lye, or its preparations, have been mistaken for the following: cough mixture, drinking water, sugar, medicine, milk, epsom salts, wine, and coffee.

Histories of the majority of accidental lye poisoning in children indicate that the lye was being used in solution for washing of clothes and floors or making soap. These solutions or lye pellets were carelessly left within reach of children.

LYE POISONING—AN ECONOMIC PROBLEM

Lye poisoning, both accidental and intentional, is to a large extent a problem of families in the low income group. A total of 239 of 284 cases (85 per cent) upon which the financial status of the patient was given were charity patients. Those taking lye for suicidal purposes were charity patients in 70 per cent of the instances. The cost of hospitalization and treatment were assumed by the hospitals, local charity, or local governments. That this expense may be rather great is indicated by the findings of Martin and Arena. They reported that 68 per cent of the lye poisoning cases studied by them required an average of 48 days hospitalization. Sixteen per cent of the patients were hospitalized 1 to 6 days, and the remaining 16 per cent were followed in the dispensary. In addition to the immediate hospital treatment, the patients frequently must return over a period of months and even years for dilatation of esophageal strictures. Thus the total expense of an accidental lye poisoning may be a matter of several hundred dollars.

PREVENTION

Our data indicate that the prevention of accidental lye poisoning is largely a matter of eliminating this substance as an accidental item of diet or beverage of children. Children under 5 years of age are especially involved in this problem. Adult and child education would appear to be the first logical step in the prevention of lye poisoning. Education of the adults is important because they are responsible for using the lye preparation and carelessly leaving the material lying about. They should be informed of the usual household chemicals that contain lye or caustic materials and also the grave dangers and consequences of ingesting these materials. In addition to stressing prevention of poisoning, it should also be emphasized that if poisoning does take place, whether the

burn appears mild or severe, a doctor should be consulted at once. Apparently mild caustic burns frequently result in severe strictures later unless the proper treatment is instituted early. Children should be warned about eating unfamiliar materials or drinking "water" or "milk" that has been standing around. The educational program should consist of an educational leaflet on lye prevention for general distribution by health organizations. Prevention, first aid, and the necessity of medical attention should be stressed. Likewise, placards for school use should be prepared. This material should be distributed especially widespread in rural areas. This material could be prepared by the health departments. Education of Negroes is particularly needed as this race has an unusually high lye poisoning rate.

Education as to the dangers of lye poisoning should be included in the health instruction given in school. Lye preparations should be demonstrated to the children in the classroom to familiarize them with their appearance.

SUMMARY

Accidental lye poisoning with resultant esophageal strictures continues to be a problem of considerable importance. In general, this condition is somewhat more prevalent in the southern states than in the remainder of the United States. It occurs relatively much more frequently in Negroes than in whites, and is more common in rural than urban areas. By far the greatest incidence of lye poisoning is in children from 1 to 5 years of age. Males and females are equally affected. It is rarely encountered in children under 1 year of age.

Months of treatment are necessary for cure of lye strictures of the esophagus. The majority of patients are in the economic group that cannot pay for the extended treatment that is necessary.

Prevention of accidental lye poisoning consists of continuous education of adults and children as to the dangers of ingesting the substance, and the necessity of medical care if lye is ingested.

REFERENCES

1. Life of Chevalier Jackson. *An Autobiography.* Macmillan, 1938, p. 229.

2. Vinson, P. P. Cicitricial (Benign) Stricture of the Esophagus: Tabulated Report of 186 Cases. *Ann. Otol., Rhin. & Laryng.*, 36:40–56, 1927.

3. Taylor, M. Preliminary Survey on Effect Which Lye Legislation Has Had on the Incidence of Esophageal Stricture. *Ann. Otol., Rhin. & Laryng.*, 44:1157–1158 (Dec.), 1935.

4. Martin, J. M., and Arena, J. M. Lye Poisoning and Stricture of the Esophagus: A Report of Fifty Cases. *South. M. J.*, 32:286–290 (Mar.), 1939.

Public Health Planning for War Needs: Order or Chaos?

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TO be bewildered or encouraged—that is the question raised by the rapid flow of press releases on federal public health activities. Are the many changes in national health organization during recent months indicative of confusion and mismanagement or are they signs of healthy adaptability? This question is as vital to public health workers outside the official services as it is to government personnel.

The United States Government *Manuals* rapidly become obsolete in so far as the machinery of public health administration is concerned. Probably some of the observations contained herein will also be obsolete before they are read. However, the long-term goal of present developments is not foggy. Neither are the procedures followed in efforts to harmonize the work of the many branches of government which affect public health as desultory as they might seem to a totalitarian.

The tempered man of experience as well as the tyro asks, "What do they do—this ODHWS? this OCD? What about the Red Cross? What are their functions? Where does the Children's Bureau come in?"

A major development has been the creation and the rapid growth of the Office of Civilian Defense (May 20, 1941) and of the Office of Defense Health and Welfare Services (September 3, 1941). Both, along with many other divisions, boards, and offices, are in the Office for Emergency Management, which is directly under the authority of the President through his Executive Office. It would not be illogical to include responsibilities of the Office of Price Administration and the Division of Priorities if one were being all-inclusive about the protection of health in the nation at war. Contributions to public health from the Office of Scientific Research and Development are highly significant also. The present discussion, however, is confined to the Office of Defense Health and Welfare and to the Office of Civilian Defense, two organizations which are working more directly with public health problems as they are more usually conceived even in their broader aspects.

Inevitable shifts in needs require reconstruction and invention of machinery. Public health problems in America are profoundly affected by the vast movements of population and wealth which are occurring. Not only geographic transpositions but also inevitable vocational and avocational re-alignments are produced by sudden and drastic changes in the immediate goals of the great majority of those human beings who are the American People.

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Accelerated needs in public health run in two directions: first, those changes in emphasis in and continued development of the regular public health services which have expanded rapidly since 1935; second, preparation for local emergencies which arise from enemy action. Although there is interlocking, perhaps some overlapping, and also wide variation of operations as they affect local communities, the Office of Defense Health and Welfare Services seeks, by and large, to cope with the first and the Office of Civilian Defense with the second.

That both of these Offices also render many other services not directly concerned with public health is a significant sign of the times. The medical and engineering phases of public health are still the easiest to understand and are of first importance in the event of enemy action. However, the wide economic, sociological, psychological, and legal bases on which the well-being of the country rests are now placed in an administrative perspective which indicates imagination and courage.

OFFICE OF DEFENSE HEALTH AND WELFARE SERVICES

Organization—The Office of Defense Health and Welfare Services, directed by Paul V. McNutt, superseded the Office of the Coördinator of Health, Welfare, and Related Activities. The Office utilizes the facilities of the central Federal Security Agency services, such as legal counsel, personnel and business management, and information service. Its Interdepartmental Advisory Council is composed of representatives from 20 federal agencies, including the constituent agencies of the Federal Security Agency (Office of Education, Public Health Service, Social Security Board, National Youth Administration, and Civilian Conservation Corps) as well as other federal agencies, notably the Children's Bureau. This Council advises the Director on major policy questions. Committees of specialists in the respective fields from public and private agencies, professional associations, and other interested groups have been set up on Health and Medical Care, Procurement and Assignment Service (for physicians, dentists, and veterinarians), Family Security, Social Protection, and Community Organization.

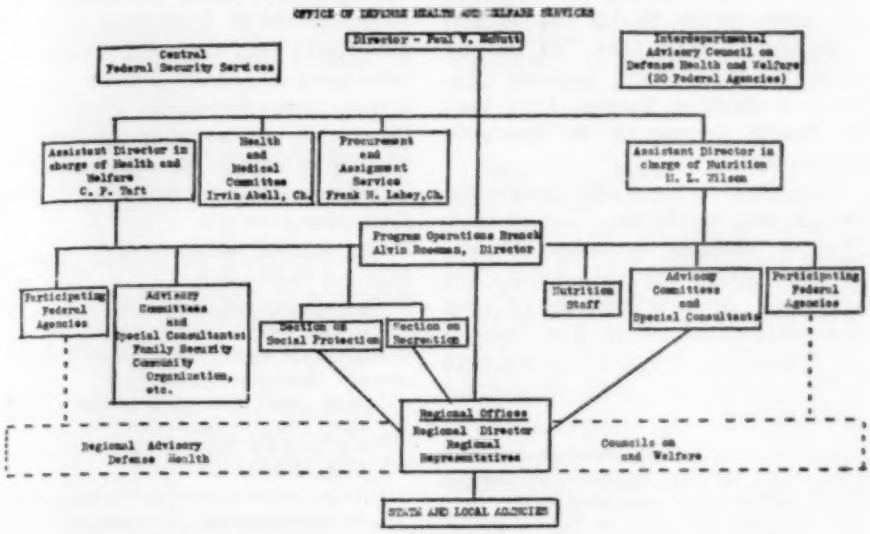
In each of the 12 geographic regions of the Social Security Board there is a regional Advisory Council corresponding in structure and function to the Interdepartmental Advisory Council at the federal level. The regional directors of the Social Security Board act as Regional Directors of Defense Health and Welfare Services and serve as chairmen of the Regional Advisory Councils.

Within the central office there are four main functional subdivisions: Division of Health and Welfare, Division of Nutrition, Health and Medical Committee, and Procurement and Assignment Service. The field programs of the Office of Defense Health and Welfare Services are integrated through the Program Operations Branch, of which Alvin Roseman is Director.

The Division of Health and Welfare is under the direction of Charles P. Taft, Assistant Director, and Geoffrey May, Deputy Assistant Director. In addition to its planning activities, the Division of Health and Welfare conducts its operations through the Public Health Service, Office of Education, Social Security Board, Recreation Section, and Social Protection Section.

The Division on Nutrition is under the direction of Milburn L. Wilson, Assistant Director, and William H. Sebrell, M.D., Deputy Assistant Director. The major activities of the Nutrition Division, which works with the National Nutrition Advisory Committee, the subcommittees on Food and Nutrition and on Food Habits of the

Diagram of Relationships within the Office of Defense Health and Welfare Services and Its Relationship to Some Other Agencies


Central Federal Security Services
Director - Paul V. Moore
Interdepartmental Advisory Council on Defense Health and Welfare (20 Federal Agencies)
Assistant Director in charge of Health and Welfare C. F. Taft
Health and Medical Committee Irvin Abell, Ch.
Procurement and Assignment Service Frank H. Lahey, Ch.
Assistant Director in charge of Nutrition H. L. Wilson
Program Operations Branch Alvin Rosman, Director
Participating Federal Agencies
Advisory Committees and Special Consultants: Family Security Community Organization, etc.
Section on Social Protection
Section on Recreation
Nutrition Staff
Advisory Committees and Special Consultants
Participating Federal Agencies
Regional Offices
Regional Director
Regional Representatives
Regional Advisory Defense Health
Councils on and Welfare
STATE AND LOCAL AGENCIES

F. Sullivan 8.10.42

National Research Council, and the State Nutrition Committees are the organization and conduct of a nation-wide campaign for the improvement of nutritional standards and food habits.

The Health and Medical Committee was established, with the approval of the President, by the Council of National Defense, September 19, 1940. This committee consisted of Dr. Irvin Abell, chairman; the Surgeon General of the Army (Major General James C. Magee); the Surgeon General of the Navy (Rear Admiral Ross T. McIntire); the Surgeon General of the U. S. Public Health Service (Dr. Thomas Parran), and the chairman of the Division of Medical Sciences of the National Research Council (Dr. Lewis H. Weed). The original order establishing the Health and Medical Committee stated:

> It will be the responsibility of the committee to advise the Council of National Defense regarding the health and medical activities affecting national defense. In carrying out its functions, the committee may (a) utilize, to the extent that such facilities are available for such purpose, the laboratories, equipment and services of the Medical Departments of the Army and Navy, of the Public Health Service, and of other government institutions; and (b) within the limits of the appropriations allocated to it, to contract with and transfer funds to such institutions, and to enter into contracts and agreements with individuals or educational or scientific institutions for studies, experimental investigations and reports.

Subcommittees were appointed in these fields: Medical Education, Dentistry, Hospitals, Industrial Medicine, Negro Health, Rehabilitation, and Nursing. These committees gave their attention chiefly to issues of medical and nursing personnel, some of the medical problems of Selective Service, and to many research problems. When the Health and Medical Committee became part of the Office of Defense Health and Welfare Services, created on September 3, 1941, its research functions were transferred to the Office of Scientific Research and Development. Dr. A. N. Richards, Chairman of the Committee

on Medical Research of the Office of Scientific Research and Development, also serves on the Health and Medical Committee of the Office of Defense Health and Welfare Services. Dr. James A. Crabtree, Surgeon, U. S. Public Health Service, is its Executive Secretary.

The Procurement and Assignment Service was established November 1, 1941, to coördinate the various demands on the nation's medical, dental, and veterinary personnel to assure their most efficient utilization. The plans for the service are designed to meet both military and civilian needs. Its detailed functions are:

1. To receive from various governmental and other agencies requests for medical, dental, and veterinary personnel.
2. To secure and maintain lists of professional personnel available, showing detailed qualifications of such personnel.
3. To utilize all suitable means to stimulate voluntary enrollment, having due regard for the over-all public health needs of the nation, including those of governmental agencies and civilian institutions.

The Section on Social Protection, in coöperation with existing state and local agencies, is responsible for safeguarding the armed forces and civilian population from the various hazards of commercialized vice. One of its major concerns is the control of venereal diseases in the armed forces by the suppression of prostitution in the extra-cantonment zones.

Closely related to the work of the Section on Social Protection is that of the Section on Recreation which is responsible for stimulating and coördinating recreational programs in communities adjacent to army, navy, and war-industrial establishments, and assisting such communities to secure supplementary recreational facilities.

OFFICE OF CIVILIAN DEFENSE

The Office of Civilian Defense was established May 20, 1941, by Executive Order within the Office for Emergency Management. James M. Landis succeeds Fiorello H. LaGuardia as Director. The original order was amended by subsequent Executive orders: (1) enlarging the Volunteer Participation Committee; (2) including the American Red Cross among the organizations to be represented on the Board for Civilian Protection.

"The functions of the OCD as defined by Executive Order are to:

"Coördinate Federal Civilian Defense activities which involve relationships between the Federal Government and State and local governments;

"Study and deal with problems which arise from the impact of the industrial and military defense effort upon local communities;

"Assist State and local governments in the establishment of State and local councils or other agencies designed to coördinate civilian defense activities;

"With the aid of the Board for Civilian Protection, plan and carry out civilian defense programs for the protection of life and property in the event of emergency, including the recruitment of and training of civilian auxiliaries;

"With the aid of the Volunteer Participation Committee, promote activities designed to sustain the national morale and to provide opportunities for constructive civilian participation in the defense program;

"Review existing or proposed measures affecting State and local defense and recommend such additional measures as may be necessary or desirable to secure adequate civilian defense.

"The Board for Civilian Protection, whose members serve as such without compensation and advise and assist the OCD Director in the formulation of civil defense programs, is made of representatives of the War Department, the Navy Department, the Department of Justice, the Federal Security Agency, the American Red Cross, the Council of State Governments, the American Municipal Association, the United States Conference of Mayors, and the Volunteer Participation Committee.

"Upon the recommendations of the Board, an Administrative order was issued establishing Regional Civilian Defense Areas and Regional Offices of the Office of Civilian

Defense coincident with the Army Corps Areas. The Division of State and Local Coöperation, previously established as an instrumentality of the National Defense Advisory Commission, was absorbed by the OCD.

"The Volunteer Participation Committee, representative of the various regions and interests of the Nation, was created by the President on July 19, 1941. It comprises 45 members who serve without compensation.

"The Committee as a whole acts in an advisory capacity to the Director of the OCD. Its members, in groups of five, function in a similar capacity as advisors to each of the nine directors of the OCD." *

The Medical Division of the Office of Civilian Defense, of which George Baehr, M.D., is the Chief Medical Officer, has a Medical Advisory Board and maintains a close relationship with the American Red Cross which has been the chief agency in meeting needs arising from catastrophes, both military and natural, for half a century. There are five groups of activities within the division. These are Emergency Medical Services and First Aid, Physical Rehabilitation, Nursing, Sanitation and Public Health Engineering, and Information Service. The Information Service has two branches—one operating officially and the other through the American Medical Association.

The Medical Division has issued two bulletins for the guidance of local Defense Councils, one July 1, 1941, entitled *Emergency Medical Service for Civilian Defense*, and a supplement in November, entitled *Equipment and Operation of Emergency Field Units*. These bulletins provide specific, detailed recommendations for local organizations. One of them summarizes the division's function thus:

> The Medical Division is charged with the preparation of plans for emergency medical service and equipment. . . . Because of geographical and administrative diversity in various parts of the country, general plans are presented as recommendations to state and local defense councils for adaptation to meet the needs of the different areas. The general adoption of a common pattern in organization and equipment for civilian defense is highly desirable so that adjacent communities may pool or exchange emergency resources in time of need.

Interrelationships: ODHWS, OCD, ARC, Children's Bureau—With so many new names and unfamiliar labels, it might appear that disorganized expansion with dislocation of essential services is taking place in public health administration. Such is not the case. Liaison officers from various groups are assigned to serve as consultants on planning committees in related agencies. The value of this policy is indicated by work being done toward definition of functions, by relinquishing certain pursuits to other groups with machinery already geared for action, and by the formation of new groupings when indicated.

For example, the Day Care Programs for Children are made possible by the recent appropriation of $150,000,000 for "Community Facilities" in defense areas. These projects must be certified by the Children's Bureau and by the Office of Education. State welfare departments will be responsible for their supervision. State and local health departments will in many areas have the responsibility of providing medical supervision and medical service in day-care centers. Volunteers, enlisted through local defense councils, and trained in some cases by personnel from constituent agencies of the Federal Security Agency which carries out much of the program of the Office of Defense Health and Welfare Services, will be essential for their functioning. The American Red Cross also will, in many localities, have much to contribute to this and many other joint programs.

A further example of the ironing out of possible duplication of effort is in the work being done in blood procurement. This job is now being continued

* *Office of Emergency Management Handbook*, November, 1941.

exclusively by the American Red Cross. It might well have become a function of the Medical Division of the Office of Civilian Defense, but the fact that the Red Cross does the work because it was already equipped to take the responsibility indicates the values realized by conference and joint planning.

This procedure of delineation of functions has been going on not only incidentally through personal contact, but also in the formulation of carefully thought out statements of policy governing the relationships of the various agencies. In *Victory*, February 3, 1942, appeared the following from a joint agreement reached by the USOCD, ODHWS, and ARC:

> The Red Cross, through its Chairman as a member of the Civilian Protection Board, has made available all of its services as needed by the U. S. Office of Civilian Defense and State and Local Defense Councils. As illustrative of its national services, attention is called to the programs involving blood plasma, medical technologists and nursing enrollment. The Office of Civilian Defense and the American Red Cross are agreed that Defense Councils and Red Cross Chapters should develop local plans of coöperation in their civilian defense activities.
>
> Recognizing the basic responsibility of government it is the duty of every Red Cross Chapter and Branch to aid in the most efficient marshalling of the community's resources. It is agreed that duplication should be avoided in these services and training courses required in civilian defense activities and that the long-established nation-wide program of the Red Cross should be utilized to the fullest extent.

That there will be no uniformity of local development or of utilization to the fullest of existing resources goes without saying. In some communities a good job is being done; in others there is lagging. Some communities had ready for use most of the things needed for disaster relief, just as they had smoothly functioning educational systems and public health organizations. Their job of doing things as well as reaching agreements on what to do and how to do it will be infinitely easier than in those where facilities are not very far along and where experience in coördination is brief. In those communities where the need is acute, both because of emergencies and of underdevelopment, there are special federal services available as well as those of the Red Cross and of other semiofficial and nonofficial agencies.

Examination of the efforts and achievements made thus far to meet public health needs of the nation at war leaves the impression that there is ample justification for encouragement. Rapid changes involving many phases of complex problems cannot be made without some apparent confusion. But acceleration in the coördination of the social and economic factors with the more obvious medical and engineering aspects of public health far more than compensates for the extra effort that is required in making the necessary shifts.

A joint statement issued May 18, 1942, by the USOCD and ARC supersedes previous ones. With regard to emergency medical services, it states:

"During bombing or other enemy attack, all services are directed from the Control Centers in charge of the Commander of the Citizens' Defense Corps. Responsibility for the care of those injured as a result of enemy action rests with the Emergency Medical Service of the Citizens' Defense Corps under the direction of the Chief of the Emergency Medical Service. . . . During the emergency period, ambulances and motor units assigned to such transportation service will be under the direction of the Chief of Emergency Medical Service or the Transport Officer. . . .

"After the emergency period the appropriate public agencies are expected to undertake the care of civilians in accordance with plans developed in conjunction with the Office of Defense Health and Welfare Services and the Federal Security Administrator. Funds will be made available for this purpose by the Federal Government through the Federal Security Administrator."

Integrating Mental Hygiene in County-wide Health Service

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IN considering the services available to the psychopathic case, the following letter is interesting:

"Dept. of Health
Washington, D. C.

Dear Sirs:

My army examination revealed that I had this defect: constitutional psychopathic inferior. In order to treat this, I would like to know just what it means, and all other details that you can give regarding it will be very much appreciated.

I thank you very much."

The boy who wrote this letter lives in a town of about 10,000 population, so there is slight chance of there being either a mental hygiene clinic or a private psychiatrist to whom he could go for advice in this very disturbing situation which has arisen in his life. Even if he lived in a city of 50,000 to 100,000 the chances would be two-to-one against there being a mental hygiene clinic available to him. In about three-fourths of the cities over 100,000 such a person could obtain help, but if he lived in a rural or semi-rural community it would have to be one of very few for mental hygiene assistance to be available to him. In 15 entire states he could obtain no such assistance.

Neuropsychiatric conditions have been responsible for about 7 per cent of all Selective Service rejections (63,000 men up to May 1 of this year). The great majority of these rejected men of necessity have gone back to home and community without being referred to any psychiatric or mental hygiene agency which could at least give an explanation and reassurance in the crisis even if unable to do any preventive or curative work. The emotional harm which accompanies rejection by the induction boards of individuals who have already bidden their families and friends goodbye and quit their jobs is very considerable. This situation is doubly unfortunate in the case of persons with previous emotional difficulties who may have been making a rather precarious adjustment anyway.

The total amount of mental hygiene service available to the country is inadequate enough but the fact that only 20 per cent of such services are in small communities, which include 75 per cent of the population, makes it impossible for many individuals with nervous and emotional problems to obtain help. Venereal and other diseases coming to the attention of public health authorities from both Selective Service and other sources are often being referred for appropriate treatment, and a rehabilitation program is being planned for defects which occur in selectees. But these plans cannot include much attention for nervous and mental disorders with existing facilities.

Why has not better provision been made for the type of illness which is responsible for half of all disability? It

* Read before the Southern Branch American Public Health Association at the Tenth Annual Meeting in St. Louis, Mo., November 11, 1941.

is largely due to the fact that the development of mental hygiene service has been left to voluntary and non-health governmental agencies where development to an adequate level has been illogical and difficult. Illogical because mental and emotional illnesses are primarily matters of public health medicine closely bound up with so-called physical or organic conditions which have been accepted as health problems. Difficult because of the scarcity of trained specialists needed and the fact that most communities are not large enough to support a full-time mental hygiene clinic, and no higher agency has undertaken to organize part-time service to groups of communities. Unreasonable stigma and prejudice rooted in past superstitions attached to mental illnesses have contributed to the indifference of the public in general and of physicians concerning mental hygiene.

It is usually at the county level where public health services meet the public. The establishment of mental hygiene work as one of the county health services (except of course in those areas where the population is concentrated into larger cities) should be the object of mental hygiene plans whether the planning is done at a state or national level. The county health department is established in the community with close relations with the school and welfare agencies, private medical practitioners, and parents, the most important sources which will send requests for mental hygiene consultation. People will come and bring their children with confidence and hope to the same health center where they have obtained other health services.

Only counties with a population of 100,000 to 150,000 need full-time mental hygiene units. Smaller counties should each have the services of a mental hygiene clinic one day a week for each 20,000 to 25,000 population.

The usual mental hygiene unit consists of one psychiatrist, one psychologist, two psychiatric social workers, and one clerk. Such a group, because it is small and needs no heavy or bulky equipment, is readily mobile, requiring only one ordinary automobile for transportation. Nurses attached to health units if they have adequate training in psychiatric social work can take the place of traveling social workers. The responsibility for organizing part-time traveling service to counties belongs in most states to the state health department.

Some idea of the magnitude of the mental health problem and the types of cases encountered is shown in Table 1. The data from these two communities, one an urban area and one a rural county, each with approximately the same proportion of Negroes, show a close agreement in the total figures for mental health problems, although the classification system used differs somewhat. Both studies give an incidence rate for mental health problems of approximately 7 per cent. Not all of these will come to the mental hygiene clinic for attention, since some are already receiving care; most of the psychotics will be in state hospitals, many of the defectives will be in state schools, and some of the delinquents will be in penal institutions. Others will not seek or accept help.

About 25 per cent of the psychotics, according to experience in the Eastern Health District,[1] still will be in the community, and this is not necessarily a bad condition if they are under the care of a mental hygiene clinic, which may be able to prevent their commitment, or their recommitment in the case of parolees from the state institutions. In a recent analysis of 100 cases of recovered schizophrenia, Dr. Thomas Rennie wrote: "The most striking single factor for recovery seems to be a long term contact with a physician or a clinic. These patients are capable of

TABLE 1

Classification and Incidence of Mental Health Problems in Two Communities

*Williamson County, Tenn.**
1938, Population 25,000 (23% Negroes)

Classification	Cases: Number	Cases: Rate per 1,000
"Active" Cases	914	36.8
Psychotic and Post-psychotic	121	4.9
Psychoneurotic	89	3.6
With Conduct or Behavior Disorder	285	11.5
With Psychopathic Traits	152	6.1
With Special Personality Type	208	8.4
Mentally Retarded	19	0.8
With Organic Conditions, Handicapped, Miscellaneous	40	1.6
"Inactive" Cases	807	32.5
Post-psychotic	35	1.4
Formerly Psychoneurotic	10	0.4
Formerly with Conduct or Behavior Disorder	129	5.2
With Psychopathic Traits	34	1.4
With Special Personality Type	126	5.1
Mentally Retarded	184	7.4
With Organic Conditions, Handicapped, Miscellaneous	289	11.7
Total Cases	1,721	69.4

* Roth, W. F., Williams, W. C., and Luton, F. H. The Relationship of Mental Hygiene to a Local Health Department Program. To be published in *A.J.P.H.*

Eastern Health District, Baltimore, Md.†
1933, Population 56,000 (22% Negroes)

Classification	Cases: Number	Cases: Rate per 1,000
Psychotic	335	6.0
Post-psychotic	67	1.2
Psychoneurotic	112	2.0
Epileptic	42	0.7
Psychopathic	73	1.3
Maladjusted, delinquents and defectives not included in above	3,167	56.5
Total Cases	3,796	67.7

† Cohen, Bernard M., and Fairbank, Ruth E. Statistical Contribution from the Mental Hygiene Study of the Eastern Health District of Baltimore, I. General Account of the 1933 Mental Hygiene Survey of the Eastern Health District. *Am. J. Psychiat.*, 94, 5:1153–1161 (Mar.), 1938.

accepting guidance and of resolving personal conflicts with the help of the psychiatrist."[2] It has been estimated that as high as 20 per cent of the patients in state hospitals without social service or outpatient follow-up could be paroled if some psychiatric or mental hygiene agency existed in the community to supervise them.[3] Parole supervision is a very helpful and ecomonical cooperative enterprise with state hospitals.

The mental hygiene clinic should take the place of the courtroom and the jail in the treatment of some alcoholics. Austin H. MacCormick at a recent meeting of the Research Council on the Problems of Alcohol said: "As soon as possible the care and treatment of alcoholics should be taken from our penal and correctional systems and turned over to state and local departments of health or hospitals, depending on the particular situation in any jurisdiction. Only when alcoholism is treated as a problem of public health and mental hygiene, rather than of law and penology, and the alcoholic considered a sick person in need of treatment, rather than an offender in need of punishment, will we put an end to our present record of almost complete failure."[4] The courts have many cases besides alcoholics for whom they would appreciate psychiatric consultation.

The schools and welfare agencies will refer most cases which come to the mental health clinic. Children referred offer the best opportunity for preventive psychiatry, but psychiatric consultation for adults referred by welfare agencies, for example, may result in whole families going off relief. Most counties have no

psychiatrists in private practice. General physicians sincerely appreciate the help they can obtain by referring what they consider the most undesirable element among their patients to the mental hygiene clinic. Recent literature contains numerous estimates as to the proportion of patients coming to the general practitioner who have an important emotional component. The most recent figures seen come from a London survey [5] which found that the psychic factor was important in the illnesses of 80 per cent of all hospital admissions, and that in any group of sick people something like 30 per cent are suffering from conditions for which it would be helpful to have psychiatric advice.

Each case referred to the mental hygiene clinic gives opportunity for more palatable instructions in mental hygiene principles than is possible by more formal methods; this educational work is probably the most valuable long-range part of the mental hygiene effort.

An outline showing the most important aspects, both clinical and educational, of a county health department mental hygiene program appears as Table 2. This is taken from the Williamson County, Tenn., mental hygiene program which has been functioning about 6 years. For the first 5 years it was carried on as a survey program from which several interesting papers have come. In the latter part of 1940 it was reorganized with the emphasis on community service looking forward to its extension to other areas of the state.

Clara Bassett, the author of *Mental Hygiene in the Community*, in an unpublished paper entitled "Mental Hygiene Possibilities in a County Health Department," stresses the importance of a thorough community survey prior to the establishment of clinical service, and gives a very fine outline to be followed in such a study. A sufficient number of surveys in different types of communities have probably been done now

TABLE 2

Outline of a County Mental Health Program, Williamson County, Tenn.

1. A psychiatric and mental hygiene clinic, serving the county.
2. A special program of training in psychiatry and mental hygiene for the regular public health personnel of the county, including:
   a. A short didactic course in the fundamentals of psychiatry
   b. Demonstration of patients at weekly staff conferences on clinic cases
   c. Routine individual and group conferences of public health nurses with a case work supervisor
   d. Joint visiting in the field by public health and psychiatric personnel
3. Psychiatric education of other professional groups:
   a. Practising physicians of the community
   b. School teachers of the county
4. Community education through:
   a. Talks to Parent Teacher Associations and similar groups
   b. Newspaper articles
   c. Distribution of literature
   d. Radio talks
   e. Films

(Eastern Health District,[1, 6, 7] Williamson County, Tenn.,[8, 9] Kentucky,[10] Chicago [11]) to make an elaborate survey unnecessary prior to starting every new county mental hygiene program. Both Miss Bassett and Dr. Roth from the Tennessee study point out, however, that surveys do more than prove the existence of a large number of cases which need help; this can now be taken for granted. They also serve to familiarize the mental hygienist with the various community leaders and agencies which will both contribute cases to the mental hygiene program and act as social and economic resources which are so important in the successful operation of the mental hygiene service.

An increasing proportion of referrals to the clinic will come from the other health department personnel after they become familiar with the help available and sensitized to recognizing cases that need such help. The public health

nurses and physicians have intimate contact with a group of people who have more than their share of the disturbing situations and emotional crises which make mental hygiene problems. The nurse who actually gets into the home frequently sees family situations which need help and, indeed, she often gives valuable help to the best of her ability, although she would likely call it common sense sympathy and understanding rather than mental hygiene.

The admirable book *The Public Health Nurse and Her Patient*, by Ruth Gilbert,[12] should be read by every health officer and nurse, and will be particularly valuable if supplemented by appropriate educational efforts of the mental hygiene psychiatrist attached to the health department. The public health physician who sees the newly identified cases of syphilis and tuberculosis frequently is aware of important mental health problems which should be referred to the mental hygiene clinic. Attendance at prenatal clinics by the psychiatrist gives an opportunity for important preventive work with expectant mothers whose emotional needs are often ignored.

A psychiatrist who attends the well child clinics has an opportunity to do real preventive psychiatry in the truest sense of the term, seeing cases of faulty habit behavior and emotional patterns before they have been recognized as problems. Such clinics are held with encouraging results in the Eastern Health District of Baltimore.[13] It has been suggested that these clinics be held in the domestic science classroom of the high schools with the assistance and under the observation of girls who will be tomorrow's mothers.

Much more could be added concerning the clinic phase of the mental hygiene program but it suffices to say that case work should be the backbone of the program. In a community containing so many persons urgently in need of help, a purely educational program falls flat.

I am reminded of the challenge of the child's charade game,

"Here we come."
"Where from?"
"What's your trade?"
"Show us some."

Mental hygiene psychiatrists must also "show us some." Teaching and preaching without performance are not likely to acquire the interest and support required for the success of the program.

Clara Bassett stresses the importance of directing the first educational work toward public health personnel which is also mentioned first in the educational aims of the Williamson County program, where it starts with a course of six didactic evening sessions supplemented by recommended reading. Dr. Roth reports that this is well accepted and is considered to be a stimulating experience by those taking the course. These lectures are followed by group conferences every 2 weeks at which cases are presented. Some psychiatric training for health department personnel is particularly helpful in the increasing number of states in which health officers are given legal responsibility in the commitment and sterilization of the mentally ill.

Weekly individual conferences are held with the nurses in which a professional member of the mental hygiene unit discusses, from a mental hygiene aspect, individual cases in the nurse's load. Suggestions are given as to management and the progress of cases is followed from week to week. Frequently the consultant actually visits the homes with the nurses.

Case consultations have already been mentioned as the most important means of educating practising physicians, most of whom will have graduated from schools with inadequate psychiatric instruction. Talks and papers to medical

groups however are also, of course, in order. These remarks apply also to educational work with the school teachers. In Alabama several state health department mental hygiene clinics are actually being held in teachers' colleges.

Talks to Parent Teacher Associations and other lay groups must be made whether or not one is convinced of their value. Care should be taken however not to expend a disproportionately large amount of time in this activity; time spent in seeing and helping troubled individuals from the community will do more toward creating confidence and good will for the program. The laity should be encouraged to form mental hygiene groups to affiliate with the state and national mental hygiene society through which literature and speakers for programs may be obtained. The National Committee for Mental Hygiene is also a source of literature which may be distributed free, or at a slight cost, and also material for newspaper articles. One state health department is putting not only pamphlet literature but a limited number of mental hygiene books in the public libraries, particularly in the rural traveling libraries.

The collection of epidemiological data in connection with mental disorders is being increasingly recognized as valuable; for this reason close collaboration should exist among the departments of mental hygiene, epidemiology, and statistics. Interesting and perhaps important correlations have been found whenever social, economic, and mental disorder interrelationships have been studied.[1, 6, 7, 8, 9, 10] There is a great need for a central register of nervous and mental disorders. This should properly be established in the state health department, but it depends on material gathered and submitted by the counties.

In closing, I wish to mention the fine address given by Sir Wilson Jameson, Chief Medical Officer of the British Ministry of Health at the American Public Health Association Meeting in Atlantic City.[14] In this address, which for the most part took the form of a report on public health conditions in England, Sir Wilson devoted a generous proportion of his time to nervous and mental disorders. It is apparent that even in England, a country at war and beset by so many emergency public health problems, mental hygiene is considered an important phase of the public health. It is important as a trend in public health thinking in our country that the Southern Branch of the American Public Health Association has placed this subject on its annual program.

REFERENCES

1. Cohen, Bernard M., and Fairbank, Ruth E. Statistical Contributions from the Mental Hygiene Study of the Eastern Health District of Baltimore. II. Psychosis in the Eastern Health District. *Am. J. Psychiat.*, 94, 6 (May), 1938.

2. Rennie, Thomas A. C. (with the assistance of J. B. Fowler). Analysis of One Hundred Cases of Schizophrenia with Recovery. *Arch. Neurol. & Psychiat.*, Aug., 1941.

3. Rosanoff, Aaron J. Extramural Care in California. *Am. J. Psychiat.*, 97:235 (July), 1940.

4. MacCormick, Austin H. Penal and Correctional Aspects of the Alcohol Problem. *Quart. J. Studies on Alcohol*, Sept., 1941.

5. Planning for Mental Health. *Lancet*, Sept. 13, 1941.

6. Cohen, Bernard M., and Fairbank, Ruth E. Statistical Contributions from the Mental Hygiene Study of the Eastern Health District of Baltimore. 1. General Account of the 1933 Mental Hygiene Survey of the Eastern Health District. *Am. J. Psychiat.*, 94, 5:1153 (Mar.), 1938.

7. Freeman, A. W., and Cohen, B. M. Preliminary Observations on the Epidemiology of Mental Disease. *A.J.P.H.*, 29, 6:633 (June), 1939.

8. Roth, W. F., Jr., Williams, W. C., and Luton, F. H. A Public Health Approach to the Rural Mental Health Problem (to be published).

9. Roth, W. F., Jr., and Luton, F. H. The Mental Health Program in Tennessee. 1. Description of the Original Study Program. 2. Statistical Report of a Psychiatric Survey in a Rural County (to be published).

10. Grimmer, Marguerite E., and Limburg, Charles C. The Mentally Ill in a Southern Community and other unpublished manuscripts in the files of the Division of Mental Hygiene, U. S. Public Health Service.

11. Faris and Dunham. *Mental Disorders in Urban Areas.* University of Chicago Press, 1939.

12. Gilbert, Ruth. *Public Health Nurse and Her Patient.* Oxford University Press, 1940.

13. Lemkau, Paul, Tietze, Christopher, and Cooper, Marcia. Report of Progress in Developing a Mental Hygiene Component of a City Health District. *Am. J. Psychiat.*, 97:4 (Jan.), 1941.

14. Jameson, Sir Wilson. War and Health in Britain. *A.J.P.H.*, 31, 12:1253 (Dec.), 1941.

Experience with the Test for Vi Agglutinative Properties for *Eberthella typhosa*

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THE study of Vi agglutination [1] with *Eberthella typhosa* was undertaken with the twofold objective of securing experience with the technical procedures and determining the practicability of performing the test as a routine procedure in a diagnostic laboratory. Vi agglutination has been found of limited value in the diagnosis of typhoid fever, since it does not occur consistently at any one stage of the illness.[2-9] On the other hand, it has been demonstrated in sera from a high percentage of typhoid carriers.[10-14] Most of these reports are based on reactions with a pure Vi strain of *E. typhosa*, designated by Bhatnagar [12] as "Vi 1," or with a strain rich in Vi antigen after absorption of the serum with a strain devoid of Vi antigen. No mention was found in the literature of a zone of inhibition (prezone, prozone, or proagglutinoid zone) in the tests, a phenomenon that was at once apparent when our work was undertaken. Centrifugation proved effective in demonstrating reactions in high concentrations of sera, not only of those shown to have zones of inhibition, but in many in which no agglutination was observed prior to this treatment. Later, it was found that Shibley (1929)[15] had made a similar observation in his study of artificially produced zones of inhibition.

TECHNIC

A pure Vi strain of *E. typhosa*, designated by Bhatnagar as "Vi 1," and the "Watson" strain, known to be rich in Vi antigen, were obtained from Dr. Kauffmann, State Serum Institute, Copenhagen, Denmark. They were maintained on inspissated egg medium,[16, 17] in sealed tubes and stored in a refrigerator.

Inspissated Egg Medium [17]

Sodium chloride solution, 0.5 per cent.. 1 part
Eggs (white and yolk)..... 3 parts

Transfer the egg contents aseptically to a weighed sterile flask containing glass beads. Determine the increase in weight and add the required amount of sterile salt solution. Mix by shaking thoroughly. Dispense aseptically 3 ml. in 125 x 13 mm. tubes. Slant and inspissate at 80° C. for 1 hour on two successive days.

Transplants were made at 6 month intervals. Subcultures on beef infusion agar were incubated from 18 to 20 hours at from 35° to 37° C. and suspended in 0.85 per cent salt solution. Living suspension was prepared each day that tests were performed. Suspension killed by the addition of 0.2 per cent formalin (40 per cent formaldehyde) was stored in a refrigerator and used for no longer than 4 weeks after preparation. The turbidity of suspensions was adjusted to that of barium sulfate standard No. 3.[18] Equal volumes (0.3 ml.) of suspen-

sion and 5-, 10-, 20-, and 40-fold dilutions of sera were combined in 11 x 75 mm. tubes, incubated for 2 hours at from 35° to 37° C., and left in a refrigerator overnight. The reactions were recorded before and after centrifugation for 10 minutes at approximately 2,000 r.p.m.

The degree of agglutination was recorded as follows:

A. Before centrifugation—
- 4+ supernatant clear; complete agglutination
- 3+ supernatant clear or nearly clear; definite clumping
- 2+ supernatant slightly turbid; definite clumping
- \+ supernatant turbid; small clumps definitely visible to unaided eye
- — uniformly turbid suspension; no clumps

B. After centrifugation—all reactions read after shaking.

Comparison with the suspension combined with salt solution for purposes of control is very important.
- 4+ complete agglutination in clear fluid
- 3+ definite agglutination in clear or nearly clear fluid
- 2+ definite agglutination in slightly turbid fluid
- \+ clumps definitely visible to the unaided eye in turbid fluid
- — no clumps; uniformly turbid suspension

Serum for purposes of control was produced in rabbits with *E. typhosa* Vi 1. The titer was relatively low. After absorption with *E. typhosa* "Felix H 901," a strain devoid of Vi antigen, no agglutination was obtained with the latter in a 10-fold or greater dilution, while the Vi 1 strain was agglutinated in an 80- or 160-fold dilution. A high titered agglutinating serum that contained no Vi agglutinative properties was also used for purposes of control.

Absorption of agglutinative properties other than Vi was undertaken with a small number of sera. A heavy suspension of the growth of *E. typhosa* Felix H 901 from beef infusion agar was made in a 5-fold dilution of serum. This was incubated 2 hours at from 35° to 37°C. and left at room temperature overnight. It was then centrifuged until the supernatant was clear—usually for 30 minutes at approximately 2,000 r.p.m. The supernatant, undiluted and in 2-, 4-, and 8-fold dilutions, was tested for agglutination with *E. typhosa* Felix H 901 and Vi 1, and usually with the Watson strain.

DISCUSSION

The results summarized in Table 1 were obtained after centrifugation of tests with living suspension of *E. typhosa* Vi 1. All sera were tested at least twice, except a few that reacted in high dilutions in the first examination. The relatively large number of

TABLE 1

Reactions in Sera Following Centrifugation of Tests with Living Suspension of E. typhosa Vi 1

Source of Specimen	Number Tested	Definite Agglutination		No Agglutination		Irregular or Indefinite Agglutination	
		No.	Per cent	No.	Per cent	No.	Per cent
Typhoid carriers	82	62	75.6	8	9.7	12	14.6
Patients having typhoid fever	37	14	37.8	12	32.4	11	29.7
Patients having infections with members of the paratyphoid-enteritidis (Salmonella) group	12	1	8.3	8	66.6	3	25.0
Individuals who had received typhoid vaccine	46	7	15.2	34	73.9	5	10.8
Random specimens*	157	8	5.1	130	82.8	19	12.1

* From the information available, these specimens could not be placed in any of the other four groups.

indefinite or irregular reactions should not be misinterpreted. They usually represent no agglutination in one test and definite but incomplete agglutination (2+) in a 10-fold dilution of the serum in another test, which is no greater variation than may be expected in repeated examinations of this type. Agglutination was apparent only after centrifugation of the tests with half of the 92 sera that gave reactions.

Since some species of Salmonella possess Vi antigen, it is not surprising that serum from one patient having an infection with a member of group D Salmonella gave definite Vi agglutination with *E. typhosa* in an 80-fold dilution. Blood from three other individuals having infections with the same species failed to show any Vi agglutinative properties, while that from a fifth reacted irregularly.

TABLE 2

Vi Agglutination in Two Sera Tested at Intervals

Serum	Date Received	Date Tested	Agglutination: Before Centrifugation 1:10	1:20	1:40	1:80	1:160	1:320	After Centrifugation 1:10	1:20	1:40	1:80	1:160	1:320
No. 2213 from typhoid carrier	8-5-41	8-6-41	+	+	—	—	..	..	+	+	+	—	..	..
		8-7-41	2+	3+	+	—	..	..	3+	3+	3+	+	..	..
		8-13-41	2+	2+	—	—	..	..	3+	3+	2+	—	..	..
No. 1370 from a patient having typhoid fever	5-20-41	5-20-41	—	—	—	—	+	+	4+	4+	4+	4+	3+	3+
		5-23-41	4+	3+	3+	3+	+	—	4+	4+	4+	4+	3+	—

4+ = complete agglutination
3+, 2+, and + = degree of agglutination as compared with 4+
— = no agglutination

Approximately one-third of the sera were tested with formalin-treated as well as with living suspension of *E. typhosa* Vi 1. The former was agglutinated somewhat more frequently before centrifugation, but the titer after centrifugation was often higher with living suspension.

Not infrequently, sera that reacted only after centrifugation when first tested, gave agglutination before as well as after this treatment in tests performed one or more days later. Occasionally, little or no agglutination occurred before or after centrifugation of tests with fresh sera, and definite reactions occurred in later tests. These irregularities cannot be explained by variation in the agglutinability of the living culture, since usually several sera were tested at the same time and agglutination was obtained in some of them, as well as in the artificially produced Vi agglutinating serum. Thus, it seems important that tests for Vi agglutination be performed at least twice, preferably with not less than 3 or 4 days intervening. The results with two sera, one from a patient having typhoid fever and the other from a carrier, have been summarized in Table 2 to illustrate this point.

The relatively large number (15 per cent) of reactions in sera from individuals who had received typhoid vaccine may be more apparent than real, because many such specimens that failed to agglutinate were tested only once, and therefore are not included. One of the seven individuals who had received typhoid vaccine and whose sera contained Vi agglutinative properties was a nurse who was caring for her brother, who had typhoid fever.

No *E. typhosa* was found in several fecal specimens from her; no specimens were submitted from the others.

Sufficient information is not available concerning the specimens selected at random to draw definite conclusions as to the significance of the Vi agglutinative properties in eight, or 5 per cent, of the number examined. All except one contained granular or floccular agglutinative properties or both. One fecal specimen only was received from each of two of these individuals, and none from the others. One was said to have had her gall bladder drained, but so far as could be determined, a bacteriologic examination of the bile or of feces had not been undertaken.

The presence of Vi agglutination was not correlated with floccular and granular agglutination. Of the eighty-two sera from carriers, eighty gave floccular agglutination in at least a 40-fold dilution and two, in only a 20-fold dilution. Vi agglutination occurred in one of the latter. Of the other seven in which no Vi agglutinative properties were demonstrated, one gave floccular agglutination in a 640-fold dilution, five in a 160-fold dilution, and one in an 80-fold dilution. Several sera from patients having typhoid fever contained no Vi agglutinative properties, but gave both granular and floccular agglutination with *E. typhosa* in relatively high dilutions.

Forty-five sera absorbed with *E. typhosa* Felix H 901 were tested for agglutination with *E. typhosa* Vi 1, and most of them with the Watson strain as well. Centrifugation was often necessary to demonstrate agglutination after, as well as before, absorption. There was no appreciable difference in titer with *E. typhosa* Vi 1 in unabsorbed and absorbed portions of sera. The titer with *E. typhosa* Watson in absorbed sera was usually the same as, but in a few instances lower than that with Vi 1. This procedure was not studied further, because it seemed to offer no advantage over the simpler agglutination test.

SUMMARY

The observations reported are based on the demonstration of agglutination with the strain of *E. typhosa* designated as Vi 1 by Bhatnagar. Vi agglutination was often demonstrated only after centrifugation, especially in tests with fresh sera. If these sera were retested after a few days, agglutination was sometimes observed before the tests were centrifuged. These facts may be of significance in other agglutination tests, especially in sera with zones of inhibition.

In a study of over 300 sera, definite Vi agglutination was obtained in 75 per cent from known typhoid carriers; 37 per cent from patients having typhoid fever; 15 per cent from individuals to whom typhoid vaccine had been administered; and 5 per cent of sera selected at random. Insufficient data are available to establish the significance of the reactions in the "random" specimens, and in those from persons who had received typhoid vaccine.

The demonstration of Vi agglutination with *E. typhosa* suggests infection with this microörganism and warrants thorough investigation. Absence of Vi agglutination does not exclude such a condition. The performance of this test as a routine diagnostic procedure seems practicable in any laboratory where facilities are available for adequately controlling the reactions of the agglutinating suspension and the sera.

REFERENCES

1. Felix, A., and Pitt, R. M. A New Antigen of *B. typhosus;* Its Relation to Virulence and to Active and Passive Immunisation. *Lancet,* 227:186–191, 1934

2. Felix, A., Krikorian, K. S., and Reitler, R. The Occurrence of Typhoid Bacilli Containing Vi Antigen in Cases of Typhoid Fever and of Vi Antibody in Their Sera. *J. Hyg.,* 35:421–427, 1935.

3. Horgan, E. S. Notes on the Vi Antigen of *Bacillus typhosus. J. Hyg.,* 36:368–380, 1936.

4. Almon, L., and Stovall, W. D. A Study of the Organisms and Serums from a Number of Typhoid Patients and Carriers. *Am. J. Clin. Path.,* 6:476–486, 1936.

5. Almon, L., Read, J., and Stovall, W. D. A Study of the Vi Antigenic Fraction of Typhoid Bacilli Isolated from Carriers and Cases, and the Antibody Content of the Serum of These Patients. *A.J.P.H.*, 27:357–362, 1937.

6. Bhatnagar, S. S. Vi Agglutination in the Diagnosis of Typhoid Fever and the Typhoid Carrier Condition. *Brit. M. J.*, 2:1195–1198, 1938.

7. Eliot, C. P. The Vi Agglutination Test as an Aid in the Detection of Chronic Typhoid Carriers. *Am. J. Hyg.*, 31:8–15 (Sec. B), 1940.

8. Crossley, V., MacAlpine, J., and Conway, H. Preliminary Report on Vi Agglutination as a Routine Diagnostic Test. *Canad. Pub. Health, J.*, 31:18–19, 1940.

9. Almon, L., and Stovall, W. D. Further Study of the Vi Antibody Content of the Sera of Typhoid Patients and Carriers. *J. Lab. & Clin. Med.*, 25:844–848, 1939–40.

10. Horgan, E. S., and Drysdale, A. Vi Agglutination in Detection of Typhoid Carriers. *Lancet*, 238: 1084–1085, 1940.

11. Pijper, A., and Crocker, C. G. The Agglutinins of Typhoid Carriers. *J. Hyg.*, 37:332–339, 1937.

12. Bhatnagar, S. S., Speechly, C. G. J., and Singh, M. A Vi Variant of *Salmonella typhi* and its Application to the Serology of Typhoid Fever. *J. Hyg.*, 38:663–672, 1938.

13. Feliz, A. Detection of Chronic Typhoid Carriers by Agglutination Tests. *Lancet*, 235:738–741, 1938.

14. Eliot, C. P., and Cameron, W. R. Epidemiological Investigation of Rural Typhoid with the Aid of the Vi Agglutination Test. *A.J.P.H.*, 31:599–604, 1941.

15. Shibley, G. S. Studies in Agglutination. IV. The Agglutination Inhibition Zone. *J. Exper. Med.*, 50:825–841, 1929.

16. Kauffmann, F. Untersuchungen über die Körperantigene in der Salmonella-Gruppe. *Ztschr. f. Hyg. u. Infektionskr.*, 117:778–791, 1935–36.

17. Craigie, J. Personal communication.

18. McFarland, J. The Nephelometer: An Instrument for Estimating the Number of Bacteria in Suspensions Used for Calculating the Opsonic Index and for Vaccines. *J.A.M.A.*, 49:1176–1178, 1907.

Important News

In response to numerous inquiries, the Program Committee announces that plans are proceeding to hold the 71st Annual Meeting of the Association in St. Louis, October 27–30 as planned.

Public health is sufficiently identified with the war effort to make it imperative that the profession should hold its regular session, to which will come many members of the armed forces of the United Nations and many leaders in war industry to share the latest information available both here and abroad for our common purpose. There will be representation from England, where recent experience shows that it is essential that public health groups meet—not in spite of the emergency, but because of it, and because they are so integral a part of defense.

As Dr. Parran has so well said, "Ours is the responsibility for leading the fight against the weakness from within which impedes attack upon the enemy without."

The U. S. Public Health Service Restaurant Sanitation Program*

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ACCORDING to the Public Health Service compilation of disease outbreaks conveyed through various vehicles in 1939, the number of outbreaks reported by state and city health departments from foods other than milk was greater than for all other vehicles combined. Water supplies were responsible for 43 outbreaks, milk and milk products for 41, other foods for 148, and unidentified vehicles for 17. Of the 148 food-borne outbreaks, 88 involved food poisoning, 37 gastroenteritis and dysentery, 9 botulism, 5 typhoid fever, 4 trichinosis, 2 paratyphoid fever, 1 scarlet fever, and for the remaining 2 the disease was not given.

Of the 47 food-borne outbreaks for which the type of establishment was reported, all but 4 were traced to establishments regularly serving public or semi-public meals, including restaurants, clubs, hotels, camps, schools, and public institutions. The number of public eating and drinking establishments responsible for outbreaks cannot be definitely determined from these reports, but there is every indication that it is significant, and that greater attention to restaurant sanitation is warranted.

While it is impossible to estimate the amount of disease actually spread through public eating and drinking establishments, there is no doubt that food and utensils may be infected by organisms from the saliva and other body discharges. The organisms may be transmitted by direct or indirect contact from a case or carrier among the customers or the employees. They may be coughed or sneezed on food, dishes, or utensils. They may be left on glasses, cups, spoons, and forks by mouthing. They may reach the dishwater from washers or indirectly from customers. Or cleaned dishes may be exposed to contamination by handling or droplet infection.

DEVELOPMENT OF RECOMMENDED ORDINANCE AND CODE

The Public Health Service first became actively interested in the sanitation of eating and drinking establishments in 1934. In that year minimum restaurant sanitation regulations were proposed for approval by the National Recovery Administrator in connection with Section IV, Article VIII, of the *Code of Fair Competition for the Restaurant Industry.*

Next, at the request of some health officers for a suggested form of ordinance for local use, the Public Health Service prepared the December, 1935, draft of *An Ordinance Regulating Food and Drink Establishments.* This draft was mimeographed but was not circulated except on request.

As a result of successful experience with the *Standard Milk Ordinance,* an increasing demand arose on the part of health officers for an ordinance and interpretative code on restaurant sanita-

* Read at a Joint Session of Engineering and Food and Nutrition Sections of the American Public Health Association at the Seventieth Annual Meeting in Atlantic City, N. J., October 15, 1941.

tion. Accordingly, after a detailed study of 18 existing municipal ordinances and state regulations, a tentative *Ordinance and Code Regulating Eating and Drinking Establishments* was issued in mimeographed form in March, 1938. In spite of its tentative nature there were many requests for copies, and it was adopted as a local ordinance or as state regulations in many areas.

It was not until 1940 that the Public Health Service Sanitation Advisory Board had an opportunity to review the tentative edition and consider proposed amendments. Following this meeting the first non-tentative edition of the recommended *Ordinance and Code Regulating Eating and Drinking Establishments* was issued in mimeographed form in June, 1940.

The latest edition is, therefore, the culmination of six years' effort represented by four different drafts. It embodies the best information at present available on restaurant sanitation but, like the other codes recommended by the Public Health Service, it should be considered subject to change as improvements are developed through research and experience. It is recommended for voluntary adoption by states, counties, health districts, and municipalities in order to encourage a greater uniformity and a higher level of excellence in the sanitary control of eating and drinking establishments. This edition has been incorporated in both the 1940 and the 1941 editions of the *Sanitation Code* suggested by the Public Health Service for state or local adoption in national defense areas.

Inspection forms were prepared to accompany both the 1938 and the 1940 editions. The printed 1940 inspection form is available for quantity purchases by health officers from the Superintendent of Documents. It is planned to print office ledger record forms for posting inspection and laboratory results, and sanitation rating forms for use by the states in measuring the effectiveness of local control programs.

PHYSICAL EXAMINATION OF EMPLOYEES

Naturally, many diverse viewpoints had to be coördinated in drafting an ordinance that would be generally applicable. Among the questions at issue was whether to require physical examination of food handlers in restaurants. Such a requirement was included in the 1935 draft but has been deleted from both the 1938 and the 1940 editions. During its consideration of these *Codes* the Public Health Service Sanitation Advisory Board debated the advisability of including a provision for health examinations, but concluded that the conflicting opinions of health officers on the value of routine medical examinations for food handlers did not warrant such a requirement. For example, the experience of New York City as reported by Dr. Best in 1937 [1] indicated that examinations made by private physicians were not considered reliable, and that the cost of adequate examinations by the health department was not commensurate with the public health benefits obtained. New York City has therefore discontinued annual examinations of food handlers.

Admitting that periodic examinations are unwarranted, it may be asked whether examinations made only before or at the time of employment are worth while in the case of food handlers. This is the procedure suggested in the current milk ordinance recommended by the Public Health Service, but even in that case examinations of milk handlers on farms producing milk for pasteurization is not recommended because of the large numbers involved. Employees of eating and drinking places are even more numerous, and the turnover is greater. The Advisory Board therefore concluded that even initial health examinations should not be required in a restaurant ordinance that is recommended for gen-

eral adoption. However, health officers who inquire are informed that they may include such a requirement at the time of adoption if they prefer to do so and if their official facilities for making examinations are adequate for the task.

Lest it be inferred that the recommended ordinance makes no provision for the control of communicable disease, attention is called to section 10, which makes the manager and the employee jointly responsible for the prompt reporting to the health officer of all cases of communicable disease, and to section 11, which authorizes the health officer to make adequate medical examinations of employees when infection is suspected, and to exclude infected employees from all eating and drinking establishments.

THE PROVISIONS OF THE ORDINANCE

The restaurant ordinance and code follows the same general form as the *Standard Milk Ordinance* which has had such wide acceptance. Part I is the short enabling form of the ordinance suggested for use wherever adoption by reference is considered legal. The short form greatly reduces the cost of publication, and is more readily kept up-to-date because it is so easily amended. Two short forms are presented, one a grading type, which permits enforcement by degrading or permit revocation or both, the other a non-grading type enforceable by permit revocation only. Part II is the unabridged ordinance recommended for adoption only where the short enabling form is not legal. All words referring to grading are enclosed in parentheses, so that the grading form of the unabridged ordinance is obtained by omitting the parenthesis signs only, while the non-grading form is obtained by deleting both the parentheses and the words included therein. Part III is the interpretative code, which gives the public health reason for each requirement of the ordinance and explains in detail what constitutes satisfactory compliance.

A brief outline of the provisions of the recommended restaurant ordinance may be of value in this discussion.

Sections 1 and 2 deal with definitions and permits.

Section 3 requires the public display of a grade notice in all restaurants where the grading form of the ordinance is in effect. The grade display is the means whereby the competitive effect of grading tends to improve restaurant sanitation. Section 4 authorizes the examination and condemnation of unwholesome or adulterated food or drink.

Section 5 requires the inspection of all restaurants at least once every 6 months. A restaurant found violating any item of sanitation must be notified in writing and must be given a reasonable time to correct the defect. If the same violation is again found on the next inspection the restaurant is subject to degrading or suspension of permit.

Section 6, the longest and most important of the sections, lists the sanitation standards for grade A restaurants, which are identical with the minimum requirements where the non-grading form is adopted. These cover construction and cleanliness of floors, walls and ceilings, doors and windows, lighting and ventilation, toilet, water supply, hand-washing facilities, disposal of wastes, the construction, cleaning, bactericidal treatment, storage, and handling of containers and equipment, refrigeration of readily perishable foods, wholesomeness of food and drink, including milk, milk products, and shellfish from approved sources, storage and display of food and drink to avoid contamination, cleanliness of employees, and miscellaneous requirements. These items of sanitation are conveniently summarized in the inspection form prepared for use with this ordinance.

In the grading form of the *Ordinance*, the remainder of section 6 is concerned

with specifications for grade B, grade C, and itinerant restaurants. Grade B restaurants are those which fail to meet certain grade A requirements that are not of major public health significance. In communities which are not yet in position to limit operations to restaurants of the highest grade only, the grade B definition serves as the specifications for the second grade. In municipalities which under section 7 permit none but grade A restaurants to operate, except during temporary degrading periods, grade B serves a useful rôle as a penalty grade to which grade A restaurants may be temporarily degraded for minor violations which the health officer would hesitate to punish with so severe a penalty as suspension of permit.

Grade C restaurants are those which violate any of the requirements for grade B restaurants.

Itinerant restaurants (*i.e.*, those operating for temporary periods in connection with a fair, carnival, circus, public exhibition, or similar gathering) are required to comply with certain reasonable minimum requirements which are listed.

Section 7 provides that after 12 months following adoption, no restaurant may continue in business unless it complies with the minimum requirements, or (in case the grading form is in effect) unless it qualifies for grade A or grade B. Communities in position to do so may restrict operations to grade A restuarants only, except during temporary degrading periods not exceeding 30 days.

Section 8 outlines the procedure for reissuing of the permit or for regrading upward any restaurant whose permit has been suspended or which has been degraded.

Section 9 prohibits the use of any polish containing cyanide preparations for the cleansing or polishing of utensils.

Section 10 requires the restaurant manager to notify the health officer of any communicable disease among his employees, and section 11 confers on the health officer broad powers of control when infection is suspected.

Section 12 specifies that enforcement shall be in accordance with interpretations contained in the *Code*. In section 13, on penalties, the exact wording is left to the community. The last two sections deal with the usual provisions regarding repeal, date of effect, and unconstitutionality.

EXTENT OF ADOPTION

The Public Health Service urges states not already doing so to launch a restaurant sanitation program along the same lines as the milk control program. A satisfactory state program would include the appointment of a restaurant sanitarian where necessary, promotion of the local adoption of the ordinance by municipalities, counties, and health districts, the training of local inspectors, provision for consultant service to local health departments on technical problems, and the measurement of the effectiveness of local control programs by means of sanitation ratings. The promulgation of this ordinance as state regulations may serve to encourage its local adoption by cities and counties within the state. Most states will prefer to delegate the enforcement of such state regulations to local health units where these are functioning.

In response to inquiries from many health officers, the Public Health Service recently circularized all state health departments to determine the extent of adoption of the recommended restaurant sanitation ordinance. Incomplete returns indicate that the ordinance or state regulations based thereon are legally in effect in communities located in 24 states and 1 territory.

In 6 of the states the State Board of Health regulations, based on or similar to the restaurant ordinance recommended by the Public Health Service,

are enforced state-wide; in 3 of these (Nevada, Oklahoma, South Carolina) by the state health department, and in 3 (Kentucky, Mississippi, North Carolina) by both state and local health agencies. In 5 other states (Arkansas, Florida, Georgia, Indiana, Missouri) which have adopted such regulations, enforcement is not state-wide but is left to local health officials. Six of the state regulations are based on the 1938 edition, 5 on the 1940 edition.

This ordinance, or similar ordinances or regulations based thereon, has in addition been legally adopted by 74 counties and by 123 municipalities, located in 19 states. Of these, 38 located in 4 states (Arkansas, Florida, Kentucky, Ohio) adopted the state board of health regulations, 74 located in 3 states (Alaska, Illinois, Virginia) adopted the state health department's model ordinance based on that of the Public Health Service, and 85 located in 15 states adopted the Public Health Service ordinance. Approximately two-thirds of the ordinances adopted locally correspond to the 1938 edition, the remainder to the 1940 edition.

A voluntary local program of restaurant sanitation with the Public Health Service ordinance used as a guide but without legal adoption is reported under way in communities in 4 states.

That additional adoptions are being considered is indicated by the reports from a number of states. Eight states are planning to adopt state board of health regulations based on the recommended restaurant ordinance, and 53 counties and municipalities located in 15 states are considering its adoption as a local ordinance.

It is evident, therefore, that the restaurant sanitation ordinance recommended by the Public Health Service is proving very popular with health officers. It is suitable for adoption by states, counties, and municipalities both large and small, and by areas which advocate grading as well as those which prefer minimum requirements. It is particularly useful at this time in connection with the sanitation of national defense areas, in many of which the ordinance is already in effect.

REFERENCE

1. Best, William H. Is Routine Examination and Certification of Food Handlers Worth While? *A.J.P.H.*, 27, 10:1003 (Oct.), 1937.

Engineering Health Services for Small Plants*

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AS the dividing line between small and large industrial plants has been variously defined as 500 employees, 100 employees, and sometimes even less, it will be necessary for the purpose of this discussion to redefine this dividing line. For the purpose of this paper I shall define a small plant as one with less than 100 employees, and a large plant as one with 100 or more employees.

Using this arbitrary definition and census statistics,[1] it becomes immediately evident that the small plant outnumbers the large one to a great degree. Approximately 90 per cent of all of the manufacturing and mechanical industrial establishments employ less than 100 persons. About half of all of such establishments employ less than 10 persons. Thus, the small plant is the rule, not the exception. Of course, when number of employees is the only consideration, then the small plants lose some of their importance, since they employ only about 30 per cent of all workers. But from any consideration, the problem of supplying health services to small plants is a very important one.

Since fewer persons work in an individual small plant than in the large one, it can be expected that injuries and diseases will be fewer in the smaller plant. However when the incidence of injuries is calculated on a man-hour basis, a different result occurs. Statistical studies of accidents and disease, from which an analysis of frequency and severity of such disabilities in small plants can be made, are very difficult to find. Most of the reporting of this nature comes from large plants, where accurate records of accidents and diseases are more likely to be maintained.

The largest plants reporting to the National Safety Council[2] during 1939 had a disabling injury frequency rate of 11.08 (disabling injuries per million man-hours worked), while the smallest plants had a rate of 17.47, or 58 per cent higher. The severity rate for disabling injuries in the smallest plants averaged 1.66 (disability days per 1,000 man-hours worked), or 21 per cent more than the large plant rate of 1.37.

There is reason to believe that a similar situation exists for incidence and severity of disease. If we believe that safety and health services are effective and thus act to reduce the incidence and severity of injuries and disease, then we are forced to the conclusion that these rates will be higher in small plants because it is comparatively easy to show that small plants now are not receiving an adequate amount of such services.

Small plants are handicapped by hav-

* Read at a Joint Session of the Industrial Hygiene and Public Health Nursing Sections of the American Public Health Association at the Seventieth Annual Meeting in Atlantic City, N. J., October 15, 1941.

ing a relatively small amount of money to spend, and it has been shown by Newquist [3] that the smaller the plant, the more costly are health services to employer and employee. Small plants find it more difficult to justify the expenditure of sufficient money for adequate preventive measures and equipment; they find it more difficult to pay for the technical advice necessary for proper industrial health control.

A comparison of industrial health provisions for small and large plants is shown [4] in Chart 1 in which it will be seen that the contrast is very marked. In every instance the small plant is far behind the large plant in the health provisions shown, with the exception of first aid kits and accident records, and even in these two services the small plant lags.

A similar situation is shown graphically in Chart 2.

This chart shows the situation in St. Louis with respect to the health services to be discussed. St. Louis has been termed a "typical industrial area" by the U. S. Public Health Service. It is interesting to note the continuous prevalence of safety director or engineering service over either nursing or medical service. It is also interesting to note that the curve for physicians rises above that for nurses in the smaller plants, but these conditions are reversed in the larger plants.

The contrast in these provisions as to

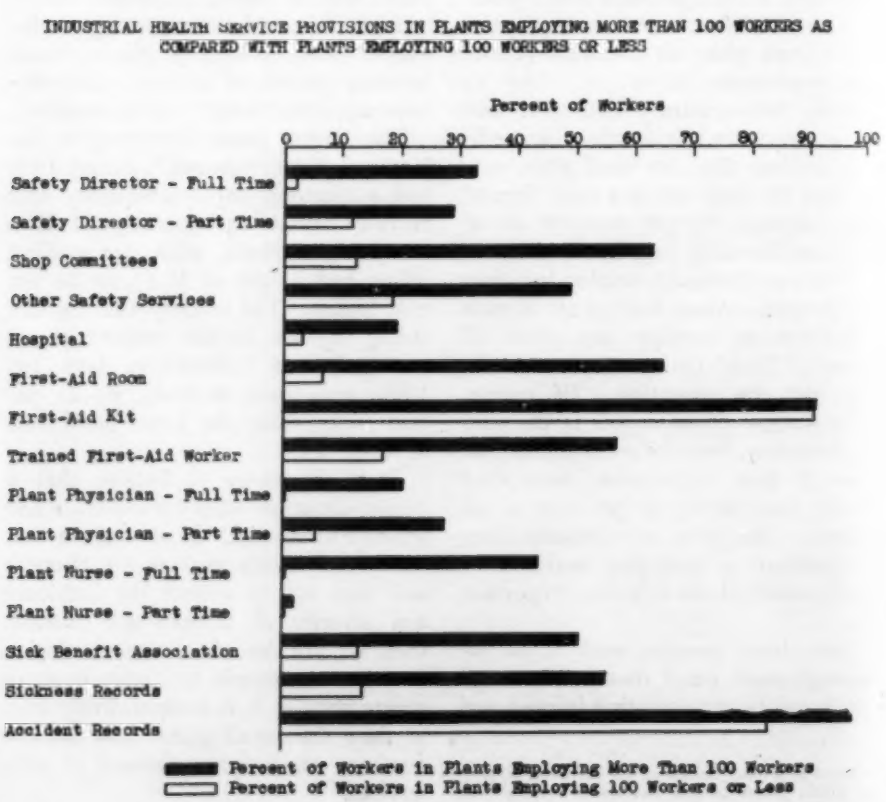

INDUSTRIAL HEALTH SERVICE PROVISIONS IN PLANTS EMPLOYING MORE THAN 100 WORKERS AS COMPARED WITH PLANTS EMPLOYING 100 WORKERS OR LESS
Percent of Workers
0 10 20 30 40 50 60 70 80 90 100
Safety Director - Full Time
Safety Director - Part Time
Shop Committees
Other Safety Services
Hospital
First-Aid Room
First-Aid Kit
Trained First-Aid Worker
Plant Physician - Full Time
Plant Physician - Part Time
Plant Nurse - Full Time
Plant Nurse - Part Time
Sick Benefit Association
Sickness Records
Accident Records
Percent of Workers in Plants Employing More Than 100 Workers
Percent of Workers in Plants Employing 100 Workers or Less

CHART 1

large and small plants is again shown in Table 1.

TABLE 1

Extent of Industrial Part-Time and Full-Time Services of the Physician, Nurse, and Safety Director or Engineer

(From Survey Records of the St. Louis Health Division)

Service	*Per cent of All Small Plants*	*Per cent of All Large Plants*
Safety director or engineer	2.4	44.4
Nurse	0.8	28.6
Physician	1.3	23.8
None of above services	96.5	49.2

The typical health and safety set-up in the small plant is composed of the following: a physician on call, who never sees the plant or its operations except on his emergency calls; no nursing service; perhaps a man assigned to first aid, in a few instances with first aid training and who makes use of a small and indifferently-kept first aid kit; and an official—superintendent or owner—who devotes a minor part of his time to safety control work. No sickness records are kept in this typical small plant and only those accident records which are necessary under the Workmen's Compensation Law are available. This is the situation and it is the one that we should consider if health services are to be furnished to and accepted by the small plant.

We in public health work have discussed at some length and through a number of publications the need of helping the small plant with its health problem. But we have found it extremely difficult to apply our ideas.

According to census statistics, retab-

EXTENT OF INDUSTRIAL PART-TIME AND FULL-TIME SERVICES OF THE PHYSICIAN, NURSE, AND SAFETY DIRECTOR OR ENGINEER

(From survey records of the St. Louis Health Division)

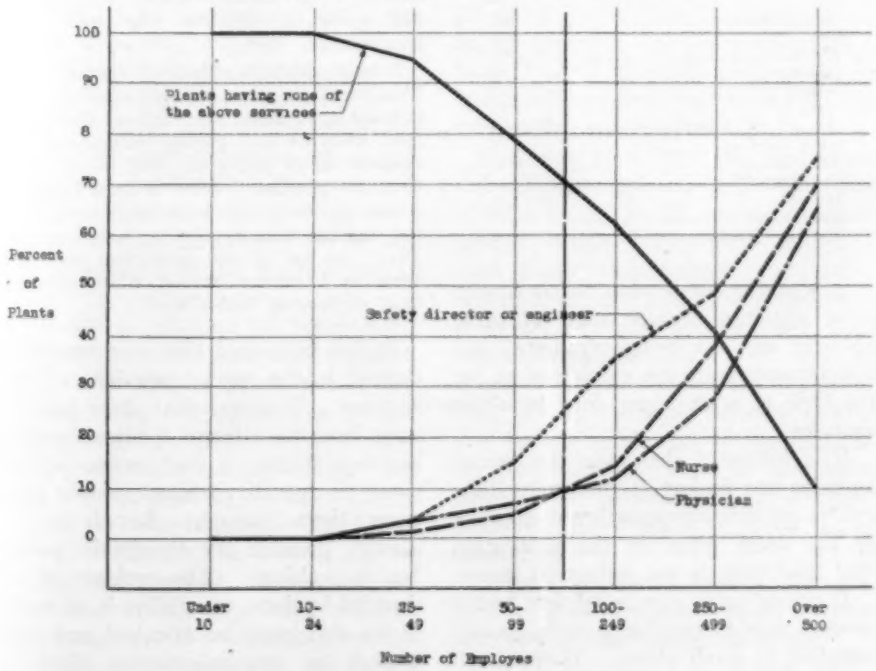


CHART 2

ulated by the U. S. Public Health Service in *Bulletin 259*, there are some 203,000 plants in the manufacturing industries of the United States and about 8,800,000 wage earners are employed in these plants. This results in an average of 43 wage earners per plant.

Table 2 shows the average number of workers involved in studies made by various official bureaus of industrial hygiene in the United States in the 1939–1940 fiscal year.[5]

TABLE 2

Average Number of Workers Involved in Industrial Hygiene Field Studies Made by Reporting State and Local Health Departments, 1939–1940

State Reporting	Average Number of Workers Involved
Utah	3,493
Texas	849
Idaho	473
West Virginia	439
Pennsylvania	238
California	176
Virginia	171
Ohio	169
North Carolina	123
Iowa	123
Wisconsin	118
Colorado	96
Indiana	77
Alabama	77
Missouri (St. Louis)	55
South Carolina	55
New Hampshire	47
Connecticut	41
Vermont	39
Rhode Island	25
Maryland (Baltimore)	4

It is perhaps somewhat unfair to cite these statistics because some of these agencies are just being organized, and also because there are valid reasons for the type of work being done by these agencies.

It is indicated that even the official agencies are finding it extremely difficult to provide adequate health services to the small plant in the proportion that they exist in our industrial set-up.

It can be safely concluded that health services now are not being satisfactorily supplied to small plants. If the small plant is to be reached by such health services, it must be done by coöperative plans of service, by public or private subsidy, or by inventing preventive methods which are less costly, thus bringing them within the price range that can be afforded by the small plant.

So much for the basic situation. Others will discuss the provision of medical and nursing services. My part of this symposium is the engineering health services for small plants.

The public health engineer should find his task less difficult than that of the nurse or physician, for he starts with two advantages:

1. The engineer is already in action in industry. The physician may find few, if any, in the plant management who will comprehend him professionally or who can aid him professionally. Similarly, the nurse has only the trained first-aider. But the public health engineer may find a fellow engineer at the drafting or designing table in even the small industrial establishment; the owner or manager frequently is an engineer or has been forced to learn technical terms and methods in this mechanical age. We engineers find many in industry who speak our language.

2. Safety work in industry is far advanced. Even small industry is safety-minded. One is tempted to doubt the truth of this statement when he finds glaring violations of the simplest safety principles. But much safety work has penetrated down to small industry. A great portion of this work has been mechanical and has been applied by technical men. These men are in the small plant and may serve as a nucleus around which may be built engineering health work.

It has been said that environmental control is the special province of the engineer. It seems that there has always been an attempt to divide public health activities so that certain professions or specialty-trained people may carry them through. But it is not always possible so to divide public health problems. The problem of industrial hygiene, especially, is of many facets and must be attacked and controlled by the coöperative effort of many trained individuals. I can think

of the educator, the physician, the dentist, the nurse, the biologist, the chemist, the first-aider, several types of engineers, the psychologist, and many more.

It may easily be necessary for these specialty-trained individuals to step over the boundaries of their particular fields, giving advice and service on the whole aspect of industrial health work. This may be particularly necessary in small plants where efforts of technical people are spread so thin. The public health engineer is continually plagued by this necessity of going outside his field into medicine, chemistry, first aid, nursing, education, and others. This will become more and more pronounced as the tendency of making occupational disease work into a full and complete program of industrial health continues.

Thus, when it is said that the engineer is particularly concerned with the control of the environment, it will be realized that this is not a hard and fast rule. The environment which the industrial hygiene engineer attempts to control may be not only the working environment, but may include the home, food, recreation, and all the multitude of materials and conditions which surround the individual. However, the employee outside of his working hours is merged into the general public and will be included in the health measures carried on for the general public. It is possible to influence his personal life and environment in general by engineering health services given during the working time, but up to the present such efforts have been largely educational or medical—not engineering—and have been confined to the large plants.

Thus the need for engineering health services reduces to a control of the working environment. It includes occupational disease exposures, accident exposures, sanitary facilities, welfare facilities, food dispensing, ventilation, noise, illumination, plumbing, time and motion studies, plant layout, and many other conditions which may have engineering aspects and require engineering knowledge for their control.

There is no need to elaborate on how these problems are controlled. But how can such technical knowledge and training be supplied to the small plant?

As with nursing, medical, and other services, it is possible and advisable for small plants to pool their resources, join in a coöperative arrangement, and thereby be able to buy engineering services. This has been done to a rather limited extent with private consultants, with trade organizations, private foundations, professional organizations, manufacturers' associations, etc. The valuable service rendered by insurance inspectors and engineers is an example.

These arrangements have worked out well for some of the small plants, but sufficient time and attention and sufficient specific information are not always given so as to solve the engineering health needs of the small plant satisfactorily, and there will be some plants which will not or cannot be reached by coöperative agreements.

It is very likely that the most direct and complete approach to the extension of engineering health service to small industry is to be performed by state and local health departments, state labor departments, and similar official organizations. In order to discharge their official responsibilities, they will, of necessity, devote more and more of their efforts to small industry. This is a form of public subsidy and should be recognized as such by providing budgets and personnel which are adequate for the amount of work to be done.

Before the official agency can adequately serve the small plant, it must overcome at least three difficulties:

1. It must overcome the prejudice which exists in the minds of small plant managers

against regulatory agencies. By example of good service and fairness, this can readily be overcome.

2. It must forget the old idea that industrial hygiene is merely occupational disease control. It must render a complete engineering health service to industry. For instance, mechanical ventilation plans should be reviewed, sanitary facilities, cross-connections, etc., inquired into, and engineering health standards promulgated.

3. It must solve the problem of large numbers of plants to be serviced, and must change its program and concepts so as to include the small plant.

For example, the value of educational methods in public health work is generally appreciated by public health people. An educational campaign of one type or another can be very successful in providing technical advice to small industry, if the material can be made attractive so it will create interest and be read, if it can be made relatively non-technical in language, and if it can be given the wide distribution that is necessary.

Small industry management does not attend medical society, nursing society, safety council, chamber of commerce, and professional engineering society meetings; nor does it read our public health publications, our medical, nursing, and engineering journals.

Unfortunately, most of the educational efforts in industrial hygiene have been limited to this type of attack; one which will reach the large plant management but not the small. In St. Louis, if we want to circularize the small industries, we must prepare literature for over 2,000 plants. When the amount of technical material to be transferred and the small portions in which it must be passed out are considered, it becomes evident that a complete educational program for the small plant is no simple matter. It will take thought and time, and the program will be slow, but the result will be well worth the effort and cost. Is there an easier way to reach these many industries?

What do the managers read? Where do they go? The answer, unfortunately, is that they are part of the general public and have practically no distinguishing features. We cannot hope to educate the general public to technical details or methods of industrial hygiene. The avenues of approach to the small plant are reduced to only a few—trade journals for some, trade organizations for some, but principally direct mail and direct contact, with the attendant difficulty of large numbers. Some types of information may be circulated through the labor organizations and through employee groups, expecting that it will reach upward to the small plant manager.

Not only in the educational campaigns, but also in plant inspections and studies, in plan examinations, and in direct contacts, will it be necessary to spend more time and more effort in the small plant. The methods of control learned in the large plant must be adapted for use in the small one. In order to do the mass work necessary, we must standardize our methods to a greater degree.

That defense slogan "It is later than you think" can be paraphrased to read "It is bigger than you think," and then it may indicate the problem of extending health services to small plants.

Perhaps I have included more than would properly be included in a paper devoted to engineering services. If so it is because it is not possible to divide the problem we are discussing in this symposium into compartments for the exclusive use of physician, nurse, and engineer. Coöperation between all the necessary technical people, which is important in the large plant, is also important in the small one. And the real difficulty is not so much a technical one as it is an administrative one; it is that of reaching the small plant

with these health services, no matter which professional group or individual is attempting it.

REFERENCES

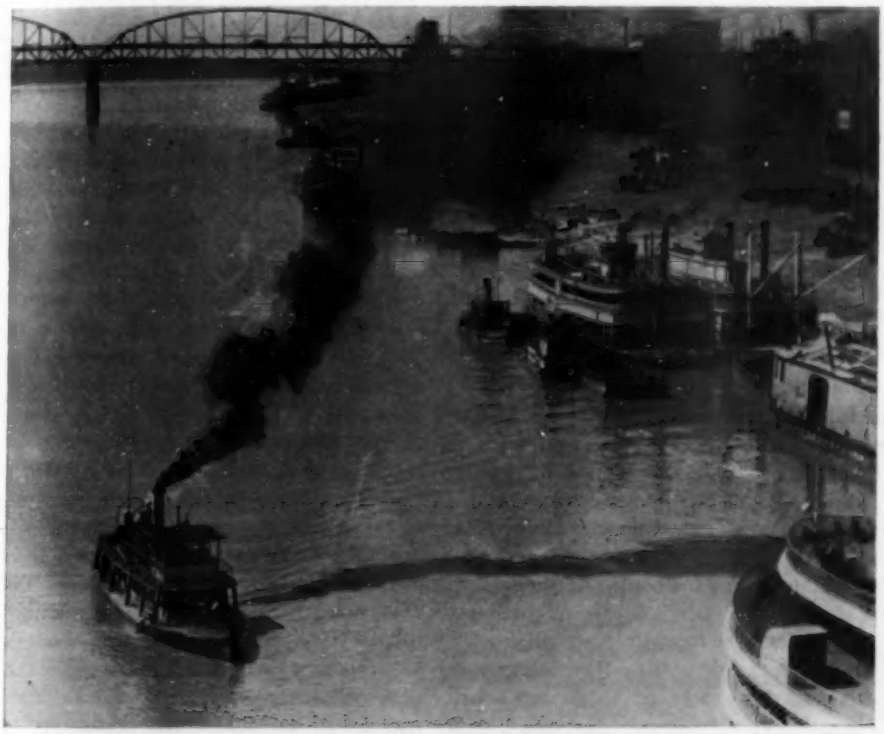
1. *Fifteenth Census of the United States*, Bureau of the Census, Department of Commerce, Manufacturers, 1929.

2. *Accident Facts* (1940 ed.), National Safety Council, Chicago, 1940.

3. Newquist, M. H. *Medical Service in Industry and Workmen's Compensation Laws.* American College of Surgeons, Chicago, 1938.

4. Bloomfield, J. J., *et al.* A Preliminary Survey of the Industrial Hygiene Problem in the United States. *Pub. Health Bull.* 259, 1940.

5. Bloomfield, J. J., and Trasko, V. M. *Industrial Hygiene Activities in State and Local Health Departments.* Division of Industrial Hygiene, National Institute of Health, May, 1941.



"Ole Man River—she just keeps rollin' along." Visitors to St. Louis are especially anxious to see the Mississippi, the world's most colorful waterway.
A.P.H.A. SEVENTY-FIRST ANNUAL MEETING—OCTOBER 27–30, 1942.

Medical Services in Small Industrial Plants*

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AN increasing amount of attention is being given to health problems in industry, but the criteria for grouping plants according to size are none too clear. To some people, all industrial plants having under 500 employees each are small, while to others the size is judged principally in terms of floor area, massiveness of machinery used, or the type of products manufactured. It has been pointed out that plants having under 500 workers usually cannot economically afford to provide their own complete programs of health protection. While this may be true, the needs for industrial health service should not be based solely upon the number of people employed, but upon a combination of circumstances, including the types and magnitude of health problems and the economic means for controlling them. A plant having 300 employees might have greater health hazards and might be more able to deal with them than another establishment, of a different type, having 600 employees. No effort will be made here to define or describe the small plant because such a classification would include too many different attributes to permit a concise definition covering all industrial establishments and their problems. It is conceded, however, that the plants which may be considered within the scope of this discussion usually will have under 500 employees, and that those having under 300 each will constitute a very large majority of the group.

It is also desirable to point out that no attempt will be made to lay out a pattern of medical service which can be installed in any industrial plant in the same general manner as that involving a conventional type of press or machine tool. The type and extent of health care needed in a given plant should be based upon the various health problems involved and such determinations should be made in the same way as that used in the development of a complicated manufacturing process, or the construction of a specified type of plant building.

To say that a certain plant employing 450 people should have a part-time general surgeon or physician and a full-time nurse is not adequate or scientific unless it has been determined through analysis of the various problems in the plant that these services will be adequate. A careful study might reveal that the services of a physician having special training in industrial medicine would be necessary, and that two trained industrial nurses should be employed instead of one ordinary nurse. Industry represents one of the greatest markets for medical service to be found today and the potential purchasers far outnumber those who now provide modern medical programs. They are interested in procuring any equipment and services which will be advantageous and

* Read at a Joint Session of the Industrial Hygiene and Public Health Nursing Sections of the American Public Health Association at the Seventieth Annual Meeting in Atlantic City, N. J., October 15, 1941.

they will be much more interested in the "blue prints" and "specifications" of medical programs designed to meet their needs than in the "pig in the poke" variety.

MODERN INDUSTRIAL MEDICAL SERVICE

The kind of medical program being considered for small industrial plants is of the same general type as that to be found in the larger industries. They differ quantitatively rather than qualitatively. Modern industrial medical services are not limited to the surgical repair of accident victims but they also include all measures necessary to safeguard the health of the employees adequately, regardless of what their jobs or occupational environments might be. A staff of several physicians, nurses, and other workers might be required to carry out such a program in a large plant, while in a small establishment these same services might be rendered by a part-time physician and a part-time or full-time nurse. No plant should be considered too small for at least the part-time services of a physician and a nurse and, generally speaking, the larger the plant the greater is the need for more constant service until the size is reached where the nurse and later the physician should be employed on full-time bases.

THE INDUSTRIAL PHYSICIAN

The modern industrial physician recognizes the broad scope of his duties and is willing to render the type of service indicated in the plant with which he is associated. In addition to his basic medical training and special qualifications in the field of surgery, internal medicine, etc., he presumably also possesses professional skill to cope with all the occupational health problems which do or may occur in the plant. It would be impossible to itemize all of these duties here but they can be grouped under the following heads:

- Physical examinations (including preëmployment, periodic and terminal)
- Treatment of occupational disease and injuries
- Emergency care of non-occupational disorders
- Supervision of nursing, first aid and related services
- Inspection and medical supervision of the work conducted in the plant
- Control of sanitation and plant housekeeping
- Other technical and educational efforts to protect the health of workers
- Studies of the causes and effects of injury and illness, and of absenteeism

The modern industrial physician is not just the plant doctor who operates a "repair shop" for accident victims. He is the medical director and as such should be concerned with all of the industrial therapeutic and preventive measures necessary to safeguard the health of the entire plant population. Just as in handling individual patients, he should take problems of plant hygiene "home" with him and plan how best to handle these problems.

THE INDUSTRIAL NURSE

The industrial nurse is no longer visualized as just a finger wrapper. The scope of industrial nursing service has been outlined many times, but only to the extent of setting forth the basic phases. The entire field need not be described in detail because the real industrial nurse does not need such a guide book. But she appreciates advice and consultations on her efforts. Her skill, enthusiasm, and persistence will determine whether she will be looked upon by the workers as a nuisance or as an asset.

Although the personnel of the small plant medical department usually is limited to the doctor and nurse, other workers, such as trained attendants* or first aid workers may be employed.

* The 1939 *Supplement to the General Statutes, State of Connecticut*, Sec. 992e, defines nursing as follows:

(Cont. on page 862)

These persons do not possess the professional qualifications of registered nurses, but it must be conceded that they can render beneficial service under competent medical and nursing leadership and that there is a place for them in the small plant. But they should not be considered as adequate substitutes for registered nurses. The plant which is too small for a full-time registered nurse certainly should be able to provide this service on a part-time basis, and any plant that has enough work to occupy the time of a trained attendant or a first aid worker on a full-time basis should be able to employ a registered nurse on the same basis, either in addition to or in lieu of the less competent workers.

FULL-TIME NURSING SERVICE

Many plant officials and some physicians are of the opinion that a nurse is not needed unless there are at least 300 or 400 employees on the pay roll. There are many excellent examples to disprove this idea and one of them is cited here:

A plant in Connecticut having 150 workers recently employed a registered nurse on a part-time and probationary basis. She was instructed to take care of the first-aid work and to spend her spare time on the assembly line with other women employed in the plant. At the end of the first month she went off probation, and from part-time to full-time as the plant nurse. By this time she had several outstanding accomplishments to her credit, including the following:

1. The transfer of a worker from a machine, which he could not operate properly because of a visual defect, to a suitable job
2. The transfer of a degreaser operator, showing evidence of addiction to trichlorethylene, to a safe job
3. The correction of hygienic practices and proper protection of two machine operators having moderately severe oil folliculitis, with the result that the trouble cleared up without the men having to lose time from work or be transferred to another job
4. The discovery and transfer of an epileptic worker from a job which would have been hazardous to himself and others in case of a seizure, to a safer job

All of these adjustments were brought about in a manner which was mutually acceptable to the men and the plant officials. This nurse is more than a first aid worker. She is practising a type of modern preventive nursing which is reaching all of the employees, and even into the homes of many of them. To say that the plant officials and workers are satisfied with her services is expressing the case very mildly.

This example of what a full-time, registered nurse can do in a small plant is unique in some respects but there undoubtedly are many other similar examples. Much proof also can be cited to show what the part-time physician can do in such plants. The nurse mentioned above has received excellent assistance from the physician who serves the plant on an on-call basis. If this physician had been employed on a part-time basis the accomplishments undoubtedly would have been much greater than they were.

MEDICAL SERVICES IN INDUSTRIES

In view of progress in the field of industrial medicine it hardly appears necessary to present an argument for the service. But as proof of the enormous promotional task ahead, two examples of the present shortcomings are cited here. A recent survey of potential industrial hygiene problems in the United States,[1] covering 1,487,224 work-

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(Cont. from page 861)

a. (Registered nurse) The performing, for compensation and under the direction of a licensed physician, of any professional service requiring special education, knowledge and skill in nursing care of those mentally or physically ill and in the prevention of illness; or

b. (Trained Attendant) The performing, for compensation and under the direction of a licensed physician, of any of the simpler procedures required in nursing care of the sick, not involving the specialized education, knowledge and skill specified in subsection (a). Effective July 10, 1939.

ers in 16,803 plants, revealed that full-time and part-time services of physicians were provided for 15.5 per cent and 22.3 per cent, respectively, of the employees, while nursing care was provided on these bases for 33.3 per cent and 1.5 per cent, respectively. In the State of Connecticut a recent study [2] involving 116,639 workers showed that full-time and part-time physicians were provided for 22.7 per cent and 18.8 per cent, respectively, and that registered nurses were serving 67.4 per cent and 2.5 per cent on these same bases. These figures represented the extents to which services of physicians and nurses were available for employees in all of the plants covered. The shortcomings were much more graphic in the smaller industries.

FUTURE PROSPECTS FOR INDUSTRIAL MEDICAL SERVICES

The prospects for further development of industrial medicine are very promising. The subject is at long last, and for the time being at least, receiving a measure of attention which is justified. The impetus which has been given to the physical welfare of industrial workers during the past few years has been motivated by the growing conviction that good business and good health are inseparably related, and that industrial poor health is an unnecessary and expensive industrial waste product.

At the present time almost all Americans are rapidly becoming "tooled up" to a wartime tempo with preparedness, defense, conservation of resources, and other related topics dominating the entire picture of American life. Of the many types of resources considered under the benevolence of conservation, and on the priority lists, none is of greater individual and national importance than the physical stamina of industrial workers. It is only natural, therefore, that industrial medicine should be elevated to the level of importance which it now occupies. But if effective service is to be sustained in this sphere, it is necessary that all of the related problems be understood and dealt with soberly. Furthermore, it must be realized that whatever heights are reached during the present national emergency probably will not be entirely adequate even for normal periods of industrial activity. So the present programs for the extension and improvement of industrial medical service must be prosecuted, not only for the purpose of protecting defense workers, but to insure to all future employees safer working conditions than were found at the beginning of the present emergency.

THE CONNECTICUT PLAN FOR EXTENSION AND IMPROVEMENT

Although a very large percentage of industrial workers still are without adequate health service, there are many encouraging indications that the medical and nursing professions will do their part to eliminate this shortage. The interest which is being manifested in the State of Connecticut serves as an excellent example. The Connecticut State Medical Society and the Manufacturers' Association of Connecticut have been coöperating for some time in studies of the industrial medical problems and of ways and means of improving and extending the service. The basic policies and objectives already have been set forth in a brochure, *Conservation of Man Power Through the Extension and Improvement of Industrial Medical Service*. A second step which now is in its final stage of completion involves a statistical study of the extent to which medical care and facilities are provided in Connecticut industries. The third, and by far the most important step, involves a state-wide effort to point out the importance of adequate industrial health protection. This campaign will deal with two major

groups — physicians and individual plants. Some phases of the project already have been started but they are to receive much greater attention in the near future. The medical profession will continue to sponsor postgraduate training in industrial medicine through seminars, special society programs, and other means which may be indicated as the program expands.

The Manufacturers' Association certainly can be relied upon to enlighten industry further concerning the importance of adequate medical care of workers. In addition to the general promotional efforts which these two organizations will carry on, plans are being further developed for rendering consultation service to individual physicians and plants concerning their specific problems.

Organized labor long has been concerned with industrial health problems, and labor leaders have made very substantial contributions to the drive for better working conditions in Connecticut. They, too, can be counted upon for continued coöperation and their efforts already are being reflected by the individual workers, who are displaying intelligent and constructive appreciation of their responsibilities in this field of a higher type than ever has been observed.

Tribute also should be paid to the industrial nurses in Connecticut. They realize their opportunities and responsibilities to coöperate with others in measures which will elevate and extend the service. Leaders among the industrial nurses in the state feel that their branch of the profession is, or should be, on the same high plane as those which are limited to private nursing care of the sick, public health nursing, or other special fields. They are proceeding along the same general lines as those mentioned above for the physicians, and it may be confidently predicted that this field of service soon will surpass any previous levels of perfection.

The Bureau of Industrial Hygiene of the Connecticut State Department of Health has enjoyed a close coöperative association with the State Medical Society, the Manufacturers' Association, and industrial nurses, in the various phases of the program outlined above. The bureau has no specific responsibilities or duties in regard to industrial medical service, and only proposes to render helpful assistance. It is felt that, if each plant in the state could have adequate industrial medical service, much more effective control of occupational disease hazards could be realized than is the case today. The bureau naturally is anxious to coöperate in any measures which will be for the attainment of this goal.

This outline of organizational and promotional effort in Connecticut was given here to show that logical and sensible efforts are being made in more than one camp to bring about the type of industrial health protection which will be adequate to meet the needs in individual plants and which will be respected and utilized by the beneficiaries. These services will be offered to industries on "tailor made" bases so as to insure that the type and extent of care needed, as revealed by specific plant surveys, will be provided. The small plants will be on the priority list, and every effort will be exerted to guarantee their workers medical care equal in quality to that to be found in the larger plants. This program is not simply concerned with the present industrial situation but is also being developed with the objective of insuring to all industrial workers that every effort will be made to protect them against their jobs and their jobs against them.

REFERENCES

1. Bloomfield, J. J., *et al. A Preliminary Survey of the Industrial Hygiene Problem in the United States.* U. S. Government Printing Office, Washington, D. C., 1940.

2. The Connecticut State Medical Society and the Manufacturers' Association. *Study of Medical Services and Facilities in Connecticut Industries,* 1941.

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A CALL FOR PUBLIC HEALTH STATESMANSHIP

IT seems quite probable that as the war goes on, a medical situation, heretofore somewhat humdrum and certainly neglected, will assume such proportions as to demand solution. This is the problem of distribution of medical practitioners. Thoughtful physicians, public health workers, and many of those in fields collateral to medicine have been worried about this matter for a number of years. That there has been a plethora of physicians in urban centers and a dearth in rural areas has been no secret. It has been well known, too, that the ratio of physicians to population in one section of the country has been markedly out of proportion to that ratio in another.

The factors which have contributed to this situation are fairly obvious: adequacy of hospital facilities in one place as against their absence in another; the mental stimulation of the medical center in contrast to the danger of professional stagnation in the outposts; the more abundant life socially, culturally, and financially in the urban and prosperous communities, and the lack of these inducements and advantages where there are few people and less money. Occasionally some community, with the only practitioner dead of senility, has gone so far as to offer a subsidy in an effort to attract a physician to settle there, but in general no group has seemed willing or able to undertake, systematically, the solution of this problem. Of the many deterrents, two perhaps have been foremost. First, and quite properly, no governmental or non-governmental agency has had the authority to tell the young physician that he must go to a certain place to practise and make his home. Second, there has been the fear that any wide-scale activity related to the placement of physicians, even in an advisory capacity, might lead to some form of regimentation of the medical profession and to socialized medicine. The result of all this has been what one would expect: demand and supply have operated in a manner not nearly so satisfactorily as the *laissez-faire* group would have the public believe, but not nearly so distressingly as is proclaimed by those who, afflicted with a sort of phantom sociorrhagia, bleed vicariously for mankind.

Be all this as it may, it seems likely that the channeling of physicians into the military services will transform what was in the past a tolerable situation into an intolerable one. As nearly as can be gathered, the distribution of physicians in the United States, by ages, is somewhat as follows: under 36, some 42,700 or 24 per cent; ages 36–44, about 38,200 or 21.7 per cent; 45–54, approximately 31,900 or 18.1 per cent; and 55 and over, around 63,300 or 36 per cent. It is the 80,900 physicians under 45 years of age in which the military services are most interested, interested to the extent of needing 45,000 (including those already in the services) by December 31, 1942. This means about one out of every two physicians in that age group will be lost from their communities. And this will not be the last of it. Present indications are that, barring some unforeseen collapse in the Axis powers, the war will be a long one, and further and continuing inroads must be made on those who will be engaged in civilian practice in 1943 and 1944, and on until the end. Common sense indicates that measures must be taken to insure, on a national basis, the most sensible and effective use of those comparatively few civilian physicians who are not called to military service.

It seems exceedingly doubtful that this best use can be assured on a voluntary basis. It is hard to visualize a physician, with a comfortable urban practice, voluntarily abandoning his local prestige, his hospital affiliations and facilities, his accustomed routine, and his assured income for the exigencies of what, in many ways, would be a new start in uncomfortable circumstances, with the nearest hospital thirty miles away. And one cannot blame the physician for failing to volunteer for this sort of work, especially as some of his competitors would remain in the community he had left, would serve his patients, and when he returned some years older, he would not only have lost his practice, but would have to meet the competition of the returning medical officers with their hard-won right to preferential consideration.

Is the answer to the problem to draft all physicians into one of the present services, or a service to be created, and detail them to this place or that, as is done in the Army, Navy, or Public Health Service? We do not know the answer, and, at the present writing, we are inclined to suspect that anyone who is aggressively sure that this is the answer, or is similarly aggressive in saying it is not the answer, evidences prejudice and approaches error in direct proportion to this vehemence. And it is unlikely that either the threadbare clichés of the traditionalists or the wails of soap-box socialists will contribute to solving the problem. It was all right to listen to these champions in the leisurely days of peace, but with the situation as it is, they come under the general heading of annoying, if not dangerous, pests. But time is passing, and increasingly the problem presses for solution. Unselfish and authoritative leadership, with first interests focused on solving this problem, is what physicians and the people now want. And they want it very much and at once.

WHAT AND WHO IS AN EPIDEMIOLOGIST?

Comments on an editorial published in the April, 1942, issue of the JOURNAL.

Our thanks are due John R. Paul, M.D., Professor of Preventive Medicine, Yale University School of Medicine, for the following:

In seeking the answer to the nice question posed I am prompted to define certain qualifications which one might seek in a man to head up a department of epidemiology in a hypothetical medical school. These qualifications depend, of course, on one's definition of Epidemiology, and, if forced to give this in a sentence, one could say that Epidemiology is that subject (not yet elevated to the position of a science) which deals with the circumstances under which people get sick. Such a definition does not imply that epidemiology is limited to infectious diseases or to epidemics, or that one necessarily has to deal with *many* sick and *many* well people in order to "practise" epidemiology. Zenker elucidated the epidemiology of trichinosis from one case; and there is a growing list of examples of the study of *familial epidemiology* in which much was learned from but a few families.

With this clinical approach in mind, the qualifications of our hypothetical candidate should consist in:

A clinical background—He should not only have had clinical training but it is desirable that this training should have struck deep enough into his soul so that through the greater part of his working life he could maintain the clinician's point of view, because epidemiology deals with sick people. This maintenance of the clinician's point of view does not necessarily mean that he must keep up membership in the county medical society, but he should keep up contact with patients and should bring *clinical* judgment to bear on his problems rather than other types of judgment. He should not have to resort to scattergrams to show that all individuals of the same age group are not alike. His diagnostic methods are apt to be more like those of a detective than of a "trouble shooter." He should regard all clinical data with healthy suspicion.

The training for this should be an M.D. degree, an interneship, and perhaps an assistant residency on either the medical or pediatric service in a good hospital; or even an assistancy in one of these departments in a medical school. This experience should serve to put our candidate on either one or the other side of the fence, which separates the sheep from the goats. The distinction is important, if we believe in the words of Dr. Theobald Smith, who stated that by their very nature the clinician and the public health man use different methods in their approach to problems of human disease.

Bacteriological training—Early in the candidate's postgraduate career (probably during his assistant residency) he should be exposed to a certain amount of *responsibility* in the handling of bacteriological methods. These methods should include work with bacteria, viruses, or protozoa, and work in clinical immunology—subjects which perhaps come to life best in a hospital laboratory. Such clinical bacteriological training is important, but of course it is only one part of the picture, for bacteriology is certainly not epidemiology.

Statistical training—Having followed

our candidate through a clinical and laboratory course of sprouts, we come to the most difficult part of his training. He should be willing to interrupt his career long enough to familiarize himself with statistical methods so useful to the practice and study of epidemiology. Knowledge of such methods is of great value. That they are the beginning and end of epidemiology is doubted, even though one occasionally finds a "portentous epidemiologist" who seems to be equipped only with statistical tools and someone else's figures.

Experimental epidemiology—It is also possible, though unlikely, that our candidate may have taken a year off to try his hand in the field of experimental epidemiology; but so far relatively few investigators have developed this important subject.

Experience with field work—Our candidate would be fortunate indeed if early in his career he could have the opportunity of applying his bacteriological and statistical methods in the study of disease in the field (viz.: in the home, in an institution, in the factory, or in a small or large community). This experience is really training in Clinical Ecology—and if it "took," he would probably never be happy doing "office" work alone.

Experience with "public health epidemiology"—Useful also would be some experience in the epidemiological division of a municipal, county, or state department of health. Probably more positions of this type exist than in any other branch of the subject, and so it is this particular aspect that comes to one's mind when the title "epidemiologist" is mentioned.

Formal training—The question of formal schooling, of degrees and courses in epidemiology might be raised. Such training would be nice but it seems to be the least valuable of the experiences already mentioned. It carries with it the risk of substituting overtraining or stagnation in lecture halls for years that might better have been spent in enthusiastic work in the field or laboratory. The advantages of such training are that they may aid an individual in his search for certain kinds of jobs. But while theoretical training may be an introduction, it should never be a substitute for the practical experience needed by our candidate.

At this point it becomes obvious that one would have to seek far to find our candidate. Perhaps there are no such individuals and no medical school ready to use them. Perhaps this is the real answer to the question which the editorial has raised, and so the discussion as to what and who is an epidemiologist really brings us to another point, namely: Where is there an epidemiologist?

Signing himself as "Retired Epidemiologist," Allen W. Freeman, M.D., Professor of Public Health Administration, The Johns Hopkins University, lets fly this searching but good-natured broadside:

The epidemiologist is the fellow who gets to town at the peak of the epidemic and coasts to glory on the down or eastern leg of the epidemic curve. He goes around with a sheaf of case cards in his hand and knocks on front doors, asking impertinent questions. When he has drained the community dry of what he then calls pertinent information, he goes into a huddle with a Monroe machine and comes out with a paper for the Epidemiological Society (by invitation). When he is too old to walk from car to door he becomes a statistical or armchair epidemiologist, or in extreme cases a professor.

Epidemiologists are not born ready made. Like diamonds, they are produced by the prolonged and skillful shaping and polishing of suitable raw material. Many sorts of raw material may be processed into epidemiologists, even, occasionally, bacteriologists. County health officers seem to make the best product.

James E. Perkins, M.D., Director, Division of Communicable Diseases, State Department of Health, Albany, N. Y., says this, in a letter to the Editor:

I cannot completely ignore the shoulder chip flipping Editorial in the April, 1942, issue of the JOURNAL. It really is not surprising, however that a query is made as to the means of identification of an epidemiologist since there are no obvious insignia designating these rare individuals (particularly rare if one confines discussion to the "epidemiologist vera"). Even the Johns Hopkins School of Hygiene and Public Health doesn't give a degree of "Doctor of Epidemiology," so it is obvious that an epidemiologist cannot substantiate his status by a beautifully scrolled certification to that effect. But an *epidemiologist* can tell *another* epidemiologist unerringly. It's like sex in the flea: "the sexes look alike, you see, but *he* can tell, and so can *she!*"*

As hinted above, there are two classes legitimately designated as epidemiologists. The first class comprises a broad group of individuals ("epidemiologist expansa") who are more or less authorities in "the science of mass pathology." A layman who has engaged in researches entirely devoted to gleaning from past literature shifts in the geographical and chronological distribution of diseases may perfectly well qualify as an epidemiologist in this class. He may, in fact, be much more entitled to the designation than a recent medical school graduate who, in order to fill empty and somewhat ragged pockets, accepts temporarily a position bearing the title "epidemiologist" in a local or state department of health.

Then there is the narrower definition of "epidemiologist." This restricted use of the term refers to an individual who, through training, but chiefly through heredity, has an unusual capacity to ferret out epidemiological data through actual field investigation. He is an individual who, as Dr. Godfrey says, has "an insatiable curiosity and a healthy skepticism." But he must have other qualities as well. He is merciless to shoe leather. He has a tactful aggressiveness and a reasonably thick hide, which enables him to ascertain from the housewife, as she does the weekly wash, the exact day two and a half weeks ago Aunt Hattie from the city visited the home with her ailing youngster, and enables him to secure specimens of body fluids or discharges in spite of a reluctance on the part of the owners thereof to part with their precious secretions or excretions. It is in this latter restricted sense that one hears the statement, "Now, there's a true epidemiologist!" Hence, the species designation, "Epidemiologist vera." Even though this is a more restricted group, its membership distinctly is not confined to physicians. Many a public health nurse and lay investigator has been appropriately revered as an Epidemiologist vera.

The one quality which I have yet to see in one considered to be an epidemiologist by those capable of evaluation is "portentousness of manner and mien," mentioned in the Editorial. Epidemiology is a science, and an epidemiologist worthy of the name has the humility, objectiveness, and dislike for affectation characteristic of the scientist.

* Source forgotten.

Credit Lines

A Selective Digest of Diversified Health Interests

D. B. Armstrong, M.D., and John Lentz, M.S.

THE PUBLICATION PARADE

There is one very stimulating thing about writing a health education section for the *Journal* and that is we seldom have to plow through a lot of uninteresting material in order to unearth publications worthy of endorsement. Rare indeed are there publications which are so inferior that we think best to cast them aside. Here, then, are some items which have brightened our days during recent weeks. At the head of the summer publication parade, we would place:

The New Milwaukee Cook Book, issued by the Visiting Nurse Association, 1038 North Cass Street, Milwaukee, Wis., and priced at *$1.50 per copy*. (Spirally bound.)

Most cook books, at least to the average person, are about as interesting as worn-out vaudeville jokes. But the Milwaukee group has succeeded in presenting a cook book that is novel, original, and attractive. The first section of this publication is entitled "The Cocktail Hour" and it lists "the makings" of a number of favorite drinks from mint julep to eggnog. Following this section, the book is given over to the pet recipes of various Milwaukee citizens—and the mere reading of these is enough to create a healthy appetite. The recipes, incidentally, are not printed in type, but are reproduced in the penmanship of the various contributors. Humorous pen-and-ink sketches appear throughout the contents. From the standpoint of the mere male reviewer, the only criticism that can be made of this publication is that the recipes might be a bit more detailed. On the whole, however, this cook book is excellent and should enjoy wide popularity. Other health agencies seeking ways of raising funds should examine this, for it has all the appeal of a best seller.

This Is Medical Care in Connecticut, published by the Connecticut State Medical Society, New Haven, Conn.

This is a distinctly admirable publication and to our knowledge no other state medical society has succeeded quite so well in interpreting the physician, in his various capacities, so comprehensively and attractively for the information of the public. By means of photographs and a few words of text accompanying each picture, a complete review of public health and personal hygiene measures in Connecticut is conveyed to the reader. In fact, extraordinary skill in condensation is one of the distinguishing features of this booklet. The booklet is an effective educational device and it should create among the citizens of Connecticut a feeling of pride in the medical resources available to them.

National Foundation News, a periodical published by the National Foundation for Infantile Paralysis, 120 Broadway, New York, N. Y.

Although this is not quite a new publication, it has recently been re-designed and is now appearing in a new streamlined format conceived by Normal Bel Geddes, the famed originator of the

Please address samples of printed matter, comments, or other editorial contributions to the editors at One Madison Avenue, New York, N. Y.

Futurama and creator of the modernized Ringling circus. It is hardly necessary to add that this publication is up-to-the-minute as regards layout and typography. These features, combined with the publication's unusually well written news items, make this a periodical worthy of forthright critical approval. Incidentally, have you seen the promotional letter sent out by the Foundation on its film, "A Report to the People"? Aside from the convincing copy, reader interest is stimulated by a novel device attached to the stationery. It consists of numerous "stills" from the film, folded accordion-like, and printed to simulate a strip of motion picture film. This gives the prospective booker of the film a "preview" on paper, and the effect is quite pleasing.

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Several noteworthy annual reports ranging from modest, compact statements to expensive and elaborate presentations, deserve recognition in this publication parade.

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We commend Dr. I. F. Thompson, Commissioner of the Racine, Wis., Department of Health upon his summary of activities for the year 1941. In this report, a new technic of interpreting health work is utilized. Readers may recall an article by the late Dr. W. Frank Walker entitled "Rating My Town's Health Work" in which Dr. Walker took accepted standards of health conditions and health procedures and presented them so that one might be able to judge whether health programs in any community measured up to accepted standards. In the Racine report, Dr. Thompson has ingeniously used the yardsticks of Dr. Walker to measure the work of his department so that the people he serves may know how nearly their health agency approaches desired standards. Quotations from the article of Dr. Walker, pertaining to various phases of health department activities, are printed in red. Accompanying these quotations, are notations regarding the Racine activities. It is an excellent scheme and it makes for a singularly interesting and readable report. Another touch that we like is the signature of Dr. Thompson at the end of the foreword. It is not a facsimile reproduction, the Health Officer having signed the reports personally. As for content, the 1941 statement reflects a most outstanding record of progress on the part of the Racine Health Department.

Other 1941 annual reports of considerable merit include the following:

Mental Hygiene—Ally of Victory, published by the National Committee for Mental Hygiene, Inc., 1790 Broadway, New York, N. Y.

Here is a report which prominently features the relation of mental hygiene to the war. "Clear minds and unclouded vision" are necessary if we are to put forth our best effort, and the report points the way to bring these about. The cover, illustrations, typography, and text of this statement are done with outstanding skill.

Annual Report of the Children's Memorial Hospital of Chicago—Enhanced by an appealing cover portrait of a young child, well organized contents, and exceptionally good illustrations, this report stands head and shoulders above those issued by most hospitals. Being safety-minded, we were surprised to note that one of the photographs in this volume unconsciously pictured a most conspicuous indoor accident hazard (page 61)! Aside from this flaw, the entire report is indeed meritorious.

Two reports that reflect the current trend toward the compact, abbreviated type of annual statement come from the National Tuberculosis Association and the New York Tuberculosis and Health Association. Both are brisk, readable, and well printed little

volumes. While the longer report may be more satisfactory for certain purposes, we like the "capsule comment" of each of these statements. Both reports are pleasingly bound, and we congratulate the writers for packing a considerable amount of material into a limited amount of space.

AN EDITORIALETTE: "NATURE'S COURSE"

Herewith we offer our first guest editorialette, submitted in response to invitations extended in these columns during recent months. Dr. Bruno Gebhard, Director of the Cleveland Health Museum, has written the following:

"Let Nature take its course" is one of those sayings which can be quoted rightly or wrongly. Nature is Man's friend and enemy. Man has learned to use Nature's powers to build up what we usually call civilization and culture. But he has also used Nature to tear down civilization.

More and more we are moving away from Nature but are still a part of her. Nature's "course" is practically, "How shall we live, and how shall we live together?" In preventive medicine we no longer allow Nature to take its course. We vaccinate and we immunize. We do not allow people to become ill where it is not necessary.

Too often parents and teachers refer to Nature's course, trying to dodge educational responsibilities. There is no doubt that the recommendation "Let Nature take its course" is justified where experience means more than knowledge. But there is no excuse for holding back facts which should be known by everybody. Ignorance is seldom bliss or identical with purity.

(EDITORIAL NOTE: These columns are still open to other contributors. Please let us have your comments on any subject—preferably with a health education slant. While we cannot guarantee publication, serious consideration will be given to all material submitted.)

RADIO NOTES

Two volumes of radio scripts—each containing 26 separate dramatizations on a wide range of health topics—are available from the Baltimore City Health Department, Baltimore, Md. These volumes are a compilation of the radio programs that have recently been sponsored by Dr. Huntington Williams in his "Keeping Well Series." Each volume is priced at *$5.00*, while copies of individual scripts are offered at a cost of *$1.00*. In view of the excellence of the material and the substantial way in which these scripts are bound, we commend this as a good investment for any health department interested in inaugurating a radio program.

The "Keeping Well Series" has been aired from Baltimore over a period of several years and is considered one of the most conspicuously successful health radio programs yet offered the public. The reasons underlying Dr. Williams's success in this medium are readily apparent to anyone who examines the scripts. In the first place, a versatile writing talent has gone into the preparation of these dramatizations. In the second place, in spite of frequent failure with this method in health education elsewhere, each script is built upon a good dramatic pattern—with just enough health content to put over the desired message and just enough entertainment to hold and sustain audience interest. Each of the scripts has general appeal and there is no use trying to list the best ones; everyone will have his own preference. Audiences will probably listen and learn wherever these scripts are broadcast, and health agencies would do well to look into the material offered by the Baltimore City Health Department.

"Shadow Over the House," one of a series of radio transcriptions produced by the U. S. Public Health Service, was accorded high recognition by the Thirteenth Institute for Education by Radio at a recent meeting held in Columbus, Ohio. The script, written by Oscar Saul of the Division of Sanitary Reports and Statistics, received one of the two

awards for the best dramatizations of 1941. This transcription is one of the few health education programs that have received such recognition and it is hoped that the award will result in a more general acceptance of health transcriptions by radio station managers. "Shadow Over the House," and other transcriptions dealing with varied health subjects treated in dramatic style, are available on loan without charge from the Public Health Service or the U. S. Office of Education, Washington, D. C.

"How to Use Radio" is the title of an informative pamphlet published by the National Association of Broadcasters, 1626 K Street, N.W., Washington, D. C. This publication was prepared especially for teachers and radio chairmen making their debut as program sponsors. The booklet covers the subject thoroughly, embracing such topics as the selection of speakers, script writing, preferences of the listening audience, and that bugaboo of all radio amateurs—mike fright. The booklet is priced at *3 cents per copy*.

A NEW USE FOR WINDOW SHADES

Lucile Hook Hamlin, Associate in Public Health at the University of California, has described an ingenious method for the presentation of statistical data in the classroom. Since many health workers are frequently required to present such material during public lectures, it would perhaps be serviceable to describe Miss Hamlin's method in some detail so that others may put it to use.

In teaching vital statistics and biometry it is frequently necessary to present graphic and tabular information to classes. Blackboard presentation is time-consuming and subject to errors of transcription. Moreover, in those classes in which the same material is used progressively through the school semester, blackboard work becomes a tedious chore. Investigation of ways in which statistical information might be permanently and accurately recorded led to the use of paper graphs, size 3 feet by 3½ feet, mounted with vegetable paste on plywood. This arrangement, however, involved difficulties such as warping, the necessity for considerable storage space, heaviness, and expense.

A method of graphic presentation which is entirely satisfactory and practical with respect to preparation, presentation, storage, and expense is found in the use of an ordinary window roller shade. Sizes of approximately the same as that of the mounted paper graphs (3 feet by 3½ feet) can be bought at most stores. The material of the shade takes pencil and ink, it withstands frequent erasure, and does not smudge. A wide range of color selection makes it possible to obtain an off-white color that reduces glare to a minimum. The brackets which are used to secure the shade over a window may be fixed into the wall molding of the classroom. The desired shade-graphic is easily slipped into place, to be drawn at the appropriate time. If conditions permit, brackets may be secured in position in the storage room, where the roller shade-graphic may be kept when not in use. The rolled shade is easy to carry, and the graph is preserved in excellent condition.

When it is necessary to present numerous data in a tabular or graphic form for teaching purposes, the window roller shade is an inexpensive and practical method.

AN EXHIBIT CONTEST

Here is a good tip on ways and means of acquiring needed exhibit material—as carried out by Yolande Lyon, Public Information Secretary of the Buffalo and Erie County Tuberculosis Association, Buffalo, N. Y.:

"The Buffalo and Erie County Tuberculosis Association acquired 24 original tuberculosis window exhibits last spring as a result of a contest which it sponsored among commercial art students of the Buffalo School of Fine Arts. The undertaking grew out of a need for visual education material in a section of Buffalo chosen by the Association for an intensive health education program because of its consistently high tuberculosis death rate. The rules of the contest provided that exhibits should be no more than 30 inches in any dimension, that they should all be three dimensional, they must allow for flicker lighting effects, be of durable construction and portable, and measure up to the standards of commercial advertising matter.

"To give the participants in the contest some understanding of tuberculosis as a community problem, the health education secretary took part in the exhibit work conferences, which involved actual planning and construction by the students. The exhibits were completed within a month's time and the awards were made at a special showing and tea for the directors of the Tuberculosis Association and the Art School and other invited guests. Judges for the contest included the president of the county medical society, the director of the health department's tuberculosis division, the director of the local visiting nursing association, the representative of a Negro women's group and others. Excellent opportunity for publicity was provided at each step of the project.

"The contest had several clear-cut results. It brought to the Association 24 individually designed window exhibits which, if they had been commercially made, would have cost approximately $500. It was a means of getting across to the Art School students and their families the facts of tuberculosis prevention. The contest was also a means of promoting good will. Today the exhibits are being circulated in the territory covered by the Association and will continue to be routed to spots where they will do the most good."

THE MEANING OF LOYALTY

Although the following quotation is not closely pertinent to the field of public health, these are days when loyalty is uppermost in our minds and it is appropriate that all of us, regardless of our calling, consider the meaning of this quality in its truest and fullest sense. Here, then, is a definition of loyalty as expressed by Dr. Samuel Standard, Assistant Professor of Surgery, in an address to a recent graduating class of the New York University Medical School:

"The best evidence of a friendly, understanding, tolerant, and able faculty is an alumni group that is loyal. And what is this thing called 'loyalty'? It is difficult to define. It expresses itself as a vague feeling of gratitude and affection without value received. It isn't something that is bought and paid for. It isn't purchasable on an open market. It is no 'quid pro quo' arrangement. It is created from an unprovable feeling that what was given was given open-heartedly, freely, with only the kind hope that the recipient would find happiness and comfort in it. It is not arrived at by logical or mathematical equations. It is difficult to understand as a reasonable conclusion—it must be felt as a vague, intangible, responsive warmth of welcome, a deep sincerity, that leaves an indelible imprint which is unforgetable, and is remembered long after the deed which it accompanied is forgotten.

"Of such gossamer-thin ingredients is loyalty woven. Yet, once woven, it is indestructible; and there is no other way to weave it. It cannot be demanded, commandeered or bought. It must be earned. Any attempt to enforce it is doomed to failure. The loyalty this school expects of you is the loyalty it has earned—no more and no less."

JOTTINGS

When vacation days loomed on the horizon this year, one of us wondered whether we should hie ourselves away and play as usual or make our respite from the job "a busman's holiday" by visiting health departments. We decided that the latter would be a highly profitable way in which to spend a wartime vacation—and so it was. There is nothing that renews one's faith in the cause of public health so much as observing the profession in action. Thus, we return to our editorial chores fully convinced that we are fortunate indeed to have these pages at our disposal to sing the praises of a truly great calling. In our ramblings from one place to another, we met and talked with health officers, sanitarians, public health nurses, health educators, and other workers. From these associations, we have gleaned the following impressions and viewpoints. . . . Many health departments are facing crucial circumstances. Demands for health services are mounting day by day. Trained personnel is needed as never before. Yet, workers are being called from their posts to meet the demands of the armed forces. Admirable as is the response, still the home front must not be neglected. Of all structures, that of

public health should be left intact. We saw health officers almost in the throes of despair over the situation. How can we meet the public's demands with depleted staffs? This question was posed over and over again. . . . We find that the Cleveland Museum of Health is stimulating health agencies in many sections of the country to produce effective exhibits. Dr. Gebhard's pioneering work is rightly bearing fruit. . . . Careful attention is being given to the planning of community health meetings. Entertainment, as well as education, is given due consideration by program planners. . . . Health officers are becoming increasingly cognizant of the value of cultivating good press relations and the newspapers, in turn, are giving health news liberal amounts of space. . . . The colorful posters of the U. S. Public Health Service on syphilis and gonorrhea brighten the quarters of many health departments. They command the attention of the public, too. . . . "Give us more material on infant and child health" was a frequent request which we encountered. . . . Have you ever thought of a vaccination scar as "a health trade mark"? We heard a health officer ask a child if he might see her "health trade mark." She immediately responded and proudly displayed her vaccination scar. . . . Health workers, particularly nurses, are responding nobly to a tremendous job in communities surrounding defense plants. . . . The nutrition program has created widespread interest among all classes in proper foods, their consumption, and preparation. . . . We find that the articles of Paul de Kruif are widely read and quoted. . . . Dr. Harry Mustard's *Journal* editorial on telephone etiquette has had a marked effect on secretaries who are fast learning "how to win friends and influence people" over the wire. . . . The owner of a chain of theatres reported that good health films were welcomed by his patrons. . . . The following slogan, used by a candidate for a public legal office, was noted: "Elect me and I will help build a wall of health around this community." . . . And speaking of slogans, we saw this one (not in a health department, mind you!) in a drugstore which was promoting the sale of a well known deodorant: "Under arm defense—for a nation under arms." And that, it strikes us, is the height of something-or-other in slogan phraseology. . . . Prediction of a health officer: "Following the war, public health will truly come into its own. The public now recognizes its great value to humanity and tomorrow's world may well bring the golden era of the profession."

. . . . .

ADDENDA: Two more slogans received just before going to press—(1) "Today's Ills Equal Tomorrow's Bills—Today's Health Equals Tomorrow's Wealth" (from Florence Fiske of the Kalamazoo, Mich., Tuberculosis Association, (2) "Health Is a Go-Sign to Victory" (from David H. Meimelstein of Baltimore, Md.). . . . If you have access to *The Lancet*, one of the leading British medical journals, do not fail to read its weekly feature entitled "A Running Commentary of Peripatetic Correspondents." You will be amused, delighted, and enlightened by the varied observations recorded in this unique bit of medical journalism.

MAGAZINE ARTICLES

Recent popular magazine articles on health or of medical import:

"Discovered: An Accident Germ." Gretta Palmer. *Coronet Magazine*, July, 1942.

"The Threat of Undulant Fever." Harold J. Harris, M.D. *Parent's Magazine*, July, 1942.

"Health for the Backwoods." J. D. Ratcliff. *The New Republic*, June 8, 1942.

"One Disease Everybody Has." Gretta Palmer. *Cosmopolitan Magazine*, July, 1942.

"Varicose Veins." Maxine Davis. *Good Housekeeping Magazine*, July, 1942.

"If You Break a Bone." Louise Fox Connell. *You Magazine*, 1942 Summer Issue.

"Now Is the Time To Have Children." Paul Popenoe. *Ladies' Home Journal*, July, 1942.

"Vitamin Insurance." Forrest Williams. *You Magazine*, 1942 Summer Issue.

(The above is not presented as a complete list and the articles cited are not necessarily recommended.)

FILM NOTES

To our list of recommended films, we are happy to add the following with the suggestion that health agencies will find the first highly useful for professional education purposes and the second equally valuable for lay instruction.

(1) *Immunization Against Infectious Diseases*, produced by Lederle Laboratories, Inc., 30 Rockefeller Plaza, New York, N. Y. Length, three reels. Silent, 16 mm. version. Available to health departments without cost.

This is a remarkable film in that it contains color shots of actual cases of the more important acute communicable diseases—including such relatively rare ones as rabies and smallpox. The photography is of high quality and the content of the film is thoroughly accurate, as evidenced by the fact that the picture bears the approval of the American Academy of Pediatrics. The film, in addition to the case material presented, contains data relative to the geographical distribution of the diseases, methods of immunization, the number of doses and the amount of the injections administered, and other factual material. The film was made by Drs. Charles F. McKhann and Harry A. Towsley of the University of Michigan Medical School. The picture is not suitable for lay groups, but it may be shown to advantage at staff meetings or other gatherings of health personnel. It would be especially valuable for showing to public health nurses or before groups of health workers taking "refresher" courses. This picture is scheduled for exhibition at the American Public Health Association convention in St. Louis in October. By all means see it.

(2) *The Modest Miracle*, produced by Standard Brands. Available in two versions: one running approximately 20 minutes and prepared for showing to community groups and the like, and one running 10 minutes and designed for theatrical use. Both 16 and 35 mm. prints, in sound, are offered. No rental fee. Consult Standard Brands, 595 Madison Ave., New York, N. Y., concerning bookings.

From the standpoint of entertainment, *The Modest Miracle* is excellent. The scenario is developed around the story of the 25 years of work leading up to the synthesis of vitamni B_1—as thrilling a story as can be found in the annals of nutrition research. The work of such investigators as Eijkman, Funk, and Williams is dramatically described in a series of well staged episodes. The cast is made up of actors of considerable ability, the sets are realistic, and the photography and sound are of high quality. There are only two aspects of this picture that one might criticise: it perhaps overemphasizes the importance of enriched bread in the diet, and the dedication is a bit "stuffy." Otherwise this is a top-notch production.

BOOKS AND REPORTS

The **Modern Treatment of Syphilis**—*By Joseph Earle Moore, M.D. (2nd ed.) Springfield, Ill.: Thomas,* 1941. 674 pp. Price, $7.00.

Those who are familiar with Moore's first edition will welcome the augmented data and discussion of the second, while others will apperciate this comprehensive monograph not only as a valuable compilation of the literature but as an indispensable source.

Dr. Moore needs no introduction to syphilologists, but for the sake of others it should be said that he is Physician-in-charge of the Syphilis Division of Johns Hopkins Hospital, an outstanding member of the Clinical Coöperative Group and for many years one of the leaders of the medical profession in matters pertaining to syphilis.

His first edition has been a most valuable text of diagnosis as well as treatment from the viewpoint of the internist. Without impairment of the clear and logical style of the original, the second edition adds much new material. Included among this are sections on infectiousness, the use of Mapharsen, the oral bismuth therapy, the results of treatment, primary optic atrophy, the diagnosis of congenital infection, the interpretation of serologic tests, the public health aspects of syphilis and intensive arsenotherapy. The latter is of particular interest at a time when little but approbation of the method is to be heard. Not the least valuable of the features of this text is an excellent index.

As Dr. Moore says, the venereal disease control officer "should combine in himself public health experience and a wide clinical knowledge of syphilis" since the only available approach to the problem of control is through case finding and therapy. Careful study of this text will prove a valuable adjunct to the experience of the expert as well as instructive to the inexperienced.

W. A. Brumfield, Jr.

Modern Medicine. Its Progress and Opportunities—*By Netta Wilson and S. A. Weisman, M.D. New York: George W. Stewart,* 1942. 218 pp. Price, $2.00.

This book should stimulate the interest of senior high school or junior college students in medicine and its allied subjects. Its fifteen chapters outline landmarks in bacteriology, parasitology, physiology, cardiology, surgery, endocrinology, nutrition, anesthesia and other phases of modern medicine. Each subject is dramatically introduced by a historical or other interest-arresting anecdote and then developed simply, vividly, and, in the main, accurately up to its 1942 status. The chapter closes with a description of the respective career opportunities and the studies which will fit the candidate for such work.

Not all of the anecdotes seem to the reviewer to be in good taste. "Great Fleas Have Little Fleas" (animal parasites) begins with the gruesome account of a college initiation where two trichinosis deaths occurred after the neophytes had to eat "human flesh" (raw pork). The concluding sentence states, "This parasite . . . is today inflicting an incurable disease on from 10 to 25 million Americans." *Trichinella* may be infesting millions but not causing "incurable disease," a statement which, as a sequel to its preceding story seems especially unfortunate.

The very commendable and generally successful attempts to simplify termi-

nology and interpret science result in other inaccuracies.

As the book is evidently designed to recruit "medics" and their kin, even quotation marks cannot excuse the use of "ptomaine poisoning." Also, referring to diphtheria *vaccine* will harass future bacteriology and public health instruction. So will the statement (page 2) that ". . . germs are weakened every time they pass through a body that has good resistance to them. A germ that has passed through a highly resistant body is like a wounded soldier who cannot put up much of a fight." Another oversight (page 186) is omission of proteins from the necessary "chemical ingredients" foods.

Erroneous impressions are also given regarding some health department activities. Page 24 states that ". . . all persons who handle food in public places have to pass a medical examination. . . ." The same sort of health department must be envisaged on page 197, ". . . every public-health department sends out *tons* of educational material." Unfortunately, too many people gauge public health success by the volume of futile food handler examinations and even some health departments evaluate their program of public health education on a "tonnage" basis.

In the broad field covered by this book, inaccuracies are inevitable. Despite these criticisms, it should be very useful in high school and junior college libraries for reference and even assigned reading. However, the school physician or school nurse should first edit it with appropriate marginal notations. A few words with the classroom teacher would also be helpful. CHARLES E. SMITH

From Infancy Through Childhood—*By Louis W. Sauer, M.D., Ph.D. New York: Harper,* 1942. 200 pp. Price, $2.00.

Here is another concise, well arranged and practical handbook for parents which answers the questions most frequently raised in the care of babies and young children. It includes up-to-date material on vitamins and balanced diets and on the various immunization procedures. It is hopeful to find in the middle of this helpful volume such an excellent chapter on Mental Health. No consideration of child health today can overlook the importance of proper habit training. Dr. Sauer recognizes the advantages of the Nursery School, but warns against certain inherent dangers such as exposure to the communicable diseases.

The chapters on the prematurely born infant and the adopted child are timely and well written. The value of this book has been enhanced by excellent photographic illustrations, an appendix covering accidents, definitions of terms, and a complete index. The usual tables and charts on heights and weights are included. The publishers are to be congratulated upon the printing and general make-up of the volume.

RICHARD A. BOLT

Tuberculosis in Industry—*Report of the Symposium Held at the Saranac Laboratory for the Study of Tuberculosis, Saranac Lake, N. Y., June 9–14, 1941. New York: National Tuberculosis Association,* 1942. 374 pp. Price, $3.00.

The 1941 sessions of the Symposium were devoted exclusively to tuberculosis in industry. After brief statements by Dr. Leroy U. Gardner on sources of infection, pathology, diagnosis, and treatment of pulmonary tuberculosis, the connection between the occurrence of this disease and various occupations was discussed by members of the Symposium. Emphasis on industrial health and employer responsibility, enforced by compensation laws, has focused attention on occupation as a cause of disease. It is no longer popular to think first of overcrowding, poor housing,

dietary deficiencies, and physical or mental strain as accessory causes of a newly discovered case of tuberculosis. Some specific factor like an irritating gas or a hot or humid atmosphere in workshops now comes to mind as the most probable cause.

Reduction in the incidence of tuberculosis among the general population has been paralleled in industry. In 1911 tuberculosis of the respiratory system was the first cause of death among industrial wage earners insured by the Metropolitan Life Insurance Company, accounting for more than 20 per cent of the deaths. Today it is fifth in importance and accounts for 6½ per cent of the deaths among these workers. A study by the National Institute of Health of data from 49 mutual sick benefit associations showed a steady downward trend in deaths from tuberculosis from 1925 to 1939.

Members of the Symposium were in agreement on the following points: There can be no tuberculosis without tubercle bacilli; the opportunities for infection vary widely in different communities in different social strata in those communities; the prevalence of disease is not uniform; the source of infection is invariably another tuberculous individual; transmission of infection is usually in the immediate vicinity of the open carrier; most clinically significant tuberculosis is the result of reinfection although we recognize that sometimes primary tuberculosis may give rise to such disease.

The all-embracing environmental factor, designated as the "standard of living," was accepted as significant in the etiology of tuberculosis. It was concluded that of all the accessory environmental factors peculiar to industry only exposure to free silica is acceptable without challenge. Of the dusts, only those high in free SiO_2 are known to alter appreciably susceptibility to tuberculosis.

It was concluded that the basis of control is education and prevention, and the essence of prevention is discovery of the case and its prompt treatment.

R. R. SAYERS

The Doctors Mayo—*By Helen Clapesattle. Introduction by Dr. Guy Stanton Ford. Minneapolis: University of Minnesota Press,* 1941. 864 pp., 64 ill. Price, $3.75.

Contemporary or near-contemporary biography must of necessity be an *ex parte* statement. It cannot afford to indulge in detached weighing of evidence for or against the historical importance of its subject; nor is there the impulse to do so. It exists because a man—or, as in the present instance, a closely-knit group of men—has made sufficient impact on his time to be thought worthy of the record. The author must be, by definition of his purpose, an enthusiast. The one essential quality of such a biography, therefore, is success in portraying the color of the subject rather than his accomplishments.

The present work, in so far as it represents biography, is curiously mixed when measured by this standard. The first portion dealing largely with the older Dr. Mayo, is extraordinarily successful. Evidencing wide research, it presents an exciting picture of a pioneer civilization, in addition to a living portrait of a man. In the second portion, however, dealing with the sons, the authoress has allowed great accomplishments to mechanize the portrait. Somehow the Mayo brothers fail to emerge as the living characters they were. Possibly this is due in part to what appears to be an intent to steer away from the domestic scene wherein the color of men may often be most readily appreciated. If this course was for obvious reasons necessary, it is perhaps too bad that publication could not have been delayed until all the pigments could be employed.

One regrets a little the third portion of this volume, which consists of a too detailed description of the Mayo Clinic and Foundation, their origin, development, and organization, together with accounts of the more important medical contributions emanating therefrom, all told in a tone of somewhat fulsome praise. EDWIN P. LEHMAN

Public Works Engineers' Yearbook 1942—*Chicago: American Public Works Association,* 1942. 387 pp. Price, $3.50.

The 1942 edition of the *Public Works Engineers' Yearbook* presents an excellent overall picture of current problems in the public works field. The volume comprises the papers presented at the annual Public Works Congress which cover the major activities in this broad field of public endeavor, supplemented by timely material especially prepared by outstanding authorities. There is also included a report of the business proceedings of the association and its membership roster. The book's usefulness is increased by an index.

Organized under functional headings for ready reference, this edition of the *Yearbook* contains more than 30 authoritative articles on such subjects as:

Public Works Problems in Defense Areas
Public Works in the Post Defense Period
Highway Transportation in Wartime
Operating Results in the Combined Disposal of Garbage and Sewage
Current Developments on Brick Pavements, Concrete Paving, and Asphalt Paving
Factors Governing the Selection of the Type of Sewage Treatment
Recommended Practice for Street Lighting
Impact of Defense Activities upon West Coast Paving Practices
Civilian Protection: Plans, Organization, and Facilities
The Army Construction Program and Municipal Coöperation
Progress in Airport Development
Review and Current Status of Road and Street Stabilization.
Current Trends in Sewage Disposal
Management of Public Works Equipment and Supplies
Effect of Wartime Conditions upon Public Works in England

It will be seen from the list of articles presented that emphasis has been placed on defense. In addition, there are included a bibliography on field engineering and a series of articles on public works practices in New Orleans.

Throughout the *Yearbook,* both the administrative and technical aspects of the problem are discussed. Governmental administrators, research bureaus, libraries, and others, as well as public works engineers and officials will find a wealth of information in this important reference volume.

C. P. STRAUB

Manual for Managers of Rural and Other Small School Lunch Rooms—*Cleveland: The Ohio Dietetic Association (1001 Huron Road),* 1942. 226 pp.

This *Manual,* prepared and published by the Ohio Dietetic Association, is especially timely since federal government agencies and state and local nutrition committees are promoting the expansion of hot lunch programs in rural areas. This book recognizes that many who are thus put in charge of the lunch room have not had adequate training or experience in this work, and that they need concrete, practical guidance. The basic principals of child feeding that are illustrated are in accordance with up-to-date nutritional data. The progressive view of "education through the school lunch" is present all through the book. It recognizes the need to train children in proper health habits, as well as to provide balanced meals.

There is adequate background information given for each phase of the work so that the inexperienced worker, after reading it, will be in command of a good working knowledge of the problems involved. The suggested

forms for keeping records will orientate the novice and give valuable suggestions to the experienced. The recipes are set up clearly in a simplified form for quantities of 12, 25, and 50, which may easily be multiplied for greater amounts. All food workers should find the Tables of Weights, Measurements, and Symbols used in Recipes of great help, and the Tables of Some Common Food Measurements, and the Average Number of Servings Obtained from Common Staples, will be great time savers. The *Manual* is timely as well as efficient, and it should prove valuable to the individual managers of rural and other small lunch rooms, as well as expedite the expansion of the hot lunch program in these areas.

CONSTANCE C. HART

Manual for Teaching Midwives—*By Anita M. Jones, R.N. Bureau Publication No. 260, U. S. Department of Labor, Children's Bureau. Government Printing Office, Washington,* 1941. For sale by the Superintendent of Documents, Washington, D. C. Price, $.30.

Recently published by the Children's Bureau of the U. S. Department of Labor is this *Manual*. Its purpose is to present a well planned course of twenty classes, demonstrations, and practice periods for the instruction of midwives. Its object is to instruct the poorly trained and often uneducated midwife "to use aseptic technique; never to interfere with the delivery of the baby; and to call the doctor at the first sign of danger." The author, herself a nurse-midwife, obviously is well acquainted with the type of individual to whom this instruction should go.

Accordingly, the subject material has been simplified so far as possible and has been expressed in language suitable to the medically untrained. Of particular merit are many simple diagrams illustrating labor, delivery, etc., as it concerns the midwife, and also others for the construction of materials necessary to her and her patient so that parturition may be conducted in as safe a manner as possible.

The manual is to be recommended freely to the health departments of those states in which many deliveries must still of necessity be accomplished by midwives rather than physicians. It should also be required reading for the public health nurse in rural areas who is frequently called upon to assist the local doctor, or who, in case of emergency, may have to attend the patient herself.

C. H. PECKHAM

A Primer on the Prevention of Deformity in Childhood—*By Richard Beverly Raney, B.A., M.D. in collaboration with Alfred Rives Shands, Jr., B.A., M.D. Elyria, Ohio: National Society for Crippled Children of the United States of America, Inc.,* 1941. 188 pp. Price, $1.00.

This book, as its name implies, is concerned with the various deformities that may arise in childhood, their origin and prevention. It is designed not for orthopedic surgeons, but for the many people who are interested in crippled children and assist in their care—nurses, social workers, physicians who have had little training in this field, as well as lay-folk.

The style of the book is simple, readable, and leads to easy understanding. Eighty-seven well chosen drawings assist greatly in the presentation of the material. A glossary is appended to aid those who have difficulty with the more complicated medical terms.

The authors are to be congratulated on giving us a book which contains an amazing amount of information and yet is presented in such a fashion that those without any considerable knowledge of the subject may understand and appreciate it. This book is a valuable addition to any library.

WILLIAM T. GREEN

Food Values in Shares and Weights — *By Clara Mae Taylor. New York: Macmillan,* 1942. 92 pp. Price, $1.50.

This little book is a timely help when everyone is showing a new interest in nutrition and trying to use the most adequate diet. It not only gives the approximate recognized nutrients needed, but also tells which foods will supply them.

The real feature of the book is in the fact that it gives a quick method of evaluating diets, which is set forth in tables that show the amounts of the nutritive essentials in both shares and weights. With the share system, which has been described in earlier nutrition publications by the late Dr. Mary Swartz Rose, it is possible to show very concretely the contribution of each food stuff that the various articles of food make. The book contains graphs which illustrate this for men and women of various degrees of activity and also for the child at different stages of its growth.

The tables have been worked out according to the new recommended daily allowances suggested and adopted by the Committee on Foods and Nutrition of the National Research Council in May, 1941.

The book will be valuable to teachers of nutrition and also offer a very definite help to public health nurses as well as to the housewife who wants to help herself. MARY AGNES DAVIS

Biology for Better Living—*By Ernest E. Bayles and R. Will Burnett. New York: Silver Burdett,* 1942. 754 pp. Price, $2.28.

This biology for the secondary school reflects an increasing tendency to include material in the form of personal and public hygiene in a course designed to introduce the student to the nature of living things. One of the eight units in this book is devoted to Personal and Social Health, with an allotment of one hundred pages. Other units deal with the nature of plants and the use of land, adaptation, the use of food in the body, plant and animal behavior, evolution, inheritance, and the conservation of biologic wealth.

The book is clearly and simply written, well illustrated, and attractive in format. C. E. TURNER

Textbook of Clinical Parasitology —*By David L. Belding, M.D. New York: Appleton-Century,* 1942. 890 pp. Price, $8.50.

The present war has stimulated interest in the prevention, recognition, and treatment of parasitic diseases. It is, therefore, desirable now and in the post-war period to have available accurate knowledge of the clinical aspects and recent advances in the treatment of these diseases. This need is well met in this book. The essential medical aspects of protozoölogy, helminthology, and entomology are practically combined in a single volume. The material is clearly presented, and such matters as life cycles are enhanced by diagrammatic representation. On the whole, the text is profusely illustrated. In addition there are useful tables facilitating reference to geographic distribution, principal pathology, insect vectors, symptomatology and treatment of parasitic diseases. The technical supplement is quite complete and up to date.

Treatment is discussed in general under each disease but specific directions are found in a separate section toward the end of the book. To this reviewer it would seem to be more advantageous to have a complete chronological discussion with specific directions, dosage, etc., under each subject rather than to have to interrupt one's reading to refer to another section in the book. In the discussion of amebiasis, reference is not made to Dio-

doquin which apparently has a definite place in the therapy and possibly the prevention of that disease.

However, these are relatively minor points in a single volume which seems very useful for the practitioner, the student, the public health man, and the field worker. HARRY MOST

New Health and Growth Series— *By W. W. Charters, Ph.D., Dean F. Smiley, M.D., and Ruth M. Strang, Ph.D. New York: Macmillan,* 1941.

Grade 1.	All Through the Day	178 pp.	Price	$.72
" 2.	Through the Year	180 pp.	"	.80
" 3.	Health Secrets	242 pp.	"	.84
" 4.	Healthful Ways	246 pp.	"	.84
" 5.	Let's Be Healthy	278 pp.	"	.88
" 6.	Habits, Healthful and Safe	277 pp.	"	.92
" 7.	Growing Up Healthy	277 pp.	"	.92
" 8.	A Sound Body	310 pp.	"	.96
" 9.	Health in a Power Age	333 pp.	"	1.20

This is a delayed review of one of the best of the sets of health readers to appear during the past year. The series is such a complete revision of the original that comparisons with the earlier set are pointless.

The readers, particularly for the first four grades, are outstanding for their simplicity of statement, their interesting stories of Bobby and Nancy and their friends, and the intriguing photographs which illustrate everything from lovely Nancy in the bathtub to pictures of foods from which the reader is asked to choose a good luncheon menu. Especially well done are the narratives pointing up desirable personality habits. The authors have refrained from moralizing, and delightful stories for teachers and pupils alike are the result.

The books for the upper grades introduce materials on both structural and functional aspects of major body organs and systems. Emphasis, however, is placed on the relation of this knowledge to activities of boys and girls of the various age levels.

As to the form: each book from first grade through ninth calls for participation by the child. There are things to do, problems to work on, and questions which test how accurately the reading has been done. Beginning with the third grade reader a glossary is included and diagrams are introduced to aid the photographs in illustrating the text. Reading references enlarge the scope of the readers for junior high school level.

The photographs in this series, however, are the striking feature. Not only do they represent modern photography at its best in illustrating the text, but they are used consistently as teaching devices. Photographs offer puzzles to solve; games to play; tests of whether what is read is understood. These are new and delightful uses of pictures. The pictures, moreover, illustrate health without a word of text. This is the effect of page after page of pictures of fine healthy children having fun with life.

Of special note is the adequate treatment given the subject of nutrition on every grade level. Nutrition has been related to life activities and the growth and development of the body. Facts about foods appear in pictures and words in the first four grades; reports of experiments and tables of food values appear in the next four grades, with the story of digestion and its relation to eating habits presented in Grade 8, and the public health aspects of nutrition coming in Grade 9. It is a splendid sequence of sufficient interest even to a slightly fatigued campaigner in the present national nutrition program.

DOROTHY B. NYSWANDER

BOOKS RECEIVED

PREVENTIVE MEDICINE IN MODERN PRACTICE. Edited by Committee on Public Health Relations of The New York Academy of Medicine. New York: Hoeber, 1942. 851 pp. Price, $10.00.

FIRST AID PRIMER. By Hermann Leslie Wenger and Eleanor Sense. New York: Barrows, 1942. 104 pp. Price, $1.00.

THE MODERN ATTACK ON TUBERCULOSIS. By Henry D. Chadwick and Alton S. Pope. New York: Commonwealth, 1942. 95 pp. Price, $1.00.

HEALTH EDUCATION OF THE PUBLIC. By W. W. Bauer and Thomas G. Hull. 2d ed. Philadelphia: Saunders, 1942. 315 pp. Price, $2.75.

HEREDITY, FOOD, AND ENVIRONMENT IN THE NUTRITION OF INFANTS AND CHILDREN. By George Dow Scott. Boston: Chapman & Grimes, 1942. 778 pp. Price, $5.00.

AMERICA'S NUTRITION PRIMER. By Eleanor Sense. 4th ed. New York: Barrows, 1941. 95 pp. Price, $1.00.

THE PUBLIC HEALTH NURSING CURRICULUM GUIDE. Prepared by Joint Committee of the National Organization for Public Health Nursing and the United States Public Health Service. New York: National Organization for Public Health Nursing, 1942. 206 pp. Price, $2.00.

A COOK BOOK FOR NURSES. By Sarah C. Hill. rev. ed. New York: Barrows, 1937. 74 pp. Price, $1.25.

PEOPLE ARE IMPORTANT. By Floyd L. Ruch, Gordon N. Mackenzie, and Margaret McClean. Chicago: Scott, Foresman & Co., 1941. 283 pp. Price, $1.32.

SEX EDUCATION IN HIGH SCHOOLS. By John Newton Baker. New York: Emerson, 1942. 155 pp. Price, $2.00.

THE DYNAMIC STATE OF BODY CONSTITUENTS. By Rudolph Schoenheimer. Harvard University Monograph in Medicine and Public Health, Number 3. Cambridge: Harvard University Press, 1942. 78 pp. Price, $1.75.

ALCOHOL EXPLORED. By H. W. Haggard and E. M. Jellinek. Garden City: Doubleday, Doran, 1942. 297 pp. Price, $2.75.

THE SCIENCE OF HEALTH. By Florence L. Meredith. Philadelphia: Blakiston, 1942. 427 pp. Price, $2.50.

THE SANITARY INSPECTOR'S HANDBOOK. By Henry H. Clay. 5th ed. London: Lewis, 1942. 534 pp. Price, $5.25.

FOOD 'N' FUN FOR THE INVALID. By Florence La Ganke Harris and Dorothy A. Ridler. New York: Barrows, 1942. 255 pp. Price, $2.00.

GET MORE OUT OF LIFE. By Catherine Groves. New York: Association Press, 1941. 136 pp. Price, $1.25.

YOUTH LOOKS AT MARRIAGE. By M'Ledge Moffett. New York: Association Press, 1941. 47 pp. Price, $.25.

BLOOD GROUPING TECHNIC. By Fritz Schiff and William C. Boyd. New York: Interscience Publishers, 1942. 248 pp. Price, $5.00.

WAR GASES. By Morris B. Jacobs. New York: Interscience Publishers, 1942. 180 pp. Price, $3.00.

PRISONERS OF WAR. By William E. S. Flory. Washington: American Council on Public Affairs, 1942. 179 pp. Price, Cloth Edition, $3.25. Paper Edition, $2.75.

PROCEEDINGS OF THE EIGHTH AMERICAN SCIENTIFIC CONGRESS. Vol. I, Organization, Activities, Resolutions, Delegations. Washington: Department of State. 1941. 539 pp.

CHRONIC PULMONARY DISEASE IN SOUTH WALES COALMINERS. 1—Medical Studies. London: H. M. Stationery Office, 1942. 222 pp. Price, $3.00.

WITH THIS RING. By Ethel Miller Nash. New York: Association Press, 1942. 112 pp. Price, $1.50.

DR. BARD OF HYDE PARK. By J. Brett Langstaff. New York: Dutton, 1942. 365 pp. Price, $3.75.

A SELECTED PUBLIC HEALTH BIBLIOGRAPHY WITH ANNOTATIONS

RAYMOND S. PATTERSON, PH.D.

New Index of Illness—Lest you may have missed this inconspicuous item, your attention is called to the table that inaugurates a monthly report on admission rates to hospitals under the various Blue Cross plans.

ANON. Incidence of Hospitalization, April, 1942. Pub. Health Rep. 57, 22:842 (May 29), 1942.

Care of Premies—Successful premature nursing care as carried on in a Michigan maternity hospital is described. Survival rates prove that good care pays.

BARNES, A. C., and WILLSON, J. R. Care of the Newborn Premature Infant. J.A.M.A. 119, 7:545 (June 13), 1942.

Barnyard Note—From a wide application of neutralization tests, it appears that, in one western valley region where equine encephalitis occurs in annual epidemics, the domestic fowls serve as reservoirs for infection of mosquitoes. The proportion of susceptible horses that become infected is very high.

HAMMON, W. McD., *et al.* A Large-Scale Serum-Neutralization Survey of Certain Vertebrates as Part of an Epidemiological Study of Encephalitis of the Western Equine and St. Louis Types. J. Immunol. 43, 5:75 (May), 1942.

Simple Senile Deterioration—Are you interested in the problem of aging? Either from your own, or the standpoint of your wartime job? Then you'll find much quotable material here, such as "the earliest symptom of senility is an inability to find any good in the present state of affairs and a tendency to glorify the past." There is much scientific discussion, too, and an excellent bibliography.

KORENCHEVSKY, V. The War and the Problem of Aging. J.A.M.A. 119, 8:624 (June 20), 1942.

"Oh Wad Some Power the Giftie Gie Us" . . .—It is always a salutary experience to see ourselves as we are seen by other eyes. This British professor of preventive medicine tells his fellow medical officers what he saw of the American scheme of civilian defense. It is full of delightful comments, some typically British in their understatement, as for instance, "The leadership of the health officer in civil defense is not therefore regarded as a matter of course . . ." He is very charitable in his criticism of our floundering efforts to build a defense organization.

MACKINTOSH, J. M. Civil Defense in the United States. Pub. Health. 55, 9:163 (June), 1942.

Still the Costliest Health Hazard—Establishing clinics and padlocking houses of prostitution do not constitute an effective V. D. control plan. The social protection program of the Federal Security Agency looks to a liaison between police and welfare agencies, adequate detention facilities, vocational training of offenders and supervision of employment of girls.

MCNUTT, P. V. The Federal Fight Against Venereal Disease. J. Social Hyg. 28, 3:117 (Mar.), 1942.

"Down in the Cellar, by the Jail"—"Defiled health departments I have known" would be a good title for this incredible tale, incredible if one were not aware of the truthfulness and the probity of the narrator. Some practical solutions are proposed for this inexcusable state of affairs.

MOUNTIN, J. W. Housing of Health Departments. Pub. Health Rep. 57, 21:781 (May 22), 1942.

Pattern for Safe Water Supplies—Just which state agencies perform what sanitary control of water supplies and sewage disposal systems are tabulated in this report upon the sanitary services of the several state health departments.

MOUNTIN, J. W., and FLOOK, E. Distribution of Health Services in the Structure of the State Government. Pub. Health Rep. 57, 24:885 (June 12), 1942.

V. D. Case Finding—Here you may read all the details by which the epidemiology of the venereal diseases is carried on in one hospital clinic. Given a competent social service it is possible to obtain the names of extra-marital contacts of new cases and these may be induced to submit to examination and treatment. This story needs constant repetition; for as yet it is one of the sadly neglected fields in public health administration.

SWEENEY, A. Studies in the Epidemiology of Syphilis. Ven. Dis. Inform. 23, 4:137 (Apr.), 1942.

Worker Fitness in the National Crisis—Shortcomings of the industrial health situation are surveyed to present a disquieting picture of their inadequacies. A convincing case is made for the need of immediate strengthening of the industrial health services.

TRASKO, V. M., and BLOOMFIELD, J. J. An Analysis of Industrial Hygiene Activities in State and Local Health Departments, 1940–41. Pub. Health Rep. 57, 23:853 (June 5), 1942.

"Digging for Mrs. Miller"—How the English have organized first aid and emergency treatment is most graphically described by one who was there. Certainly every American health worker ought to be informed about what England has proved in the fire of its dreadful experience.

WILLIAMS, H. Air Raid Medical Administration in England. J.A.M.A. 119, 7:540 (June 13), 1942.

ASSOCIATION NEWS

SEVENTY-FIRST ANNUAL MEETING

ST. LOUIS, MO., OCTOBER 27–30, 1942

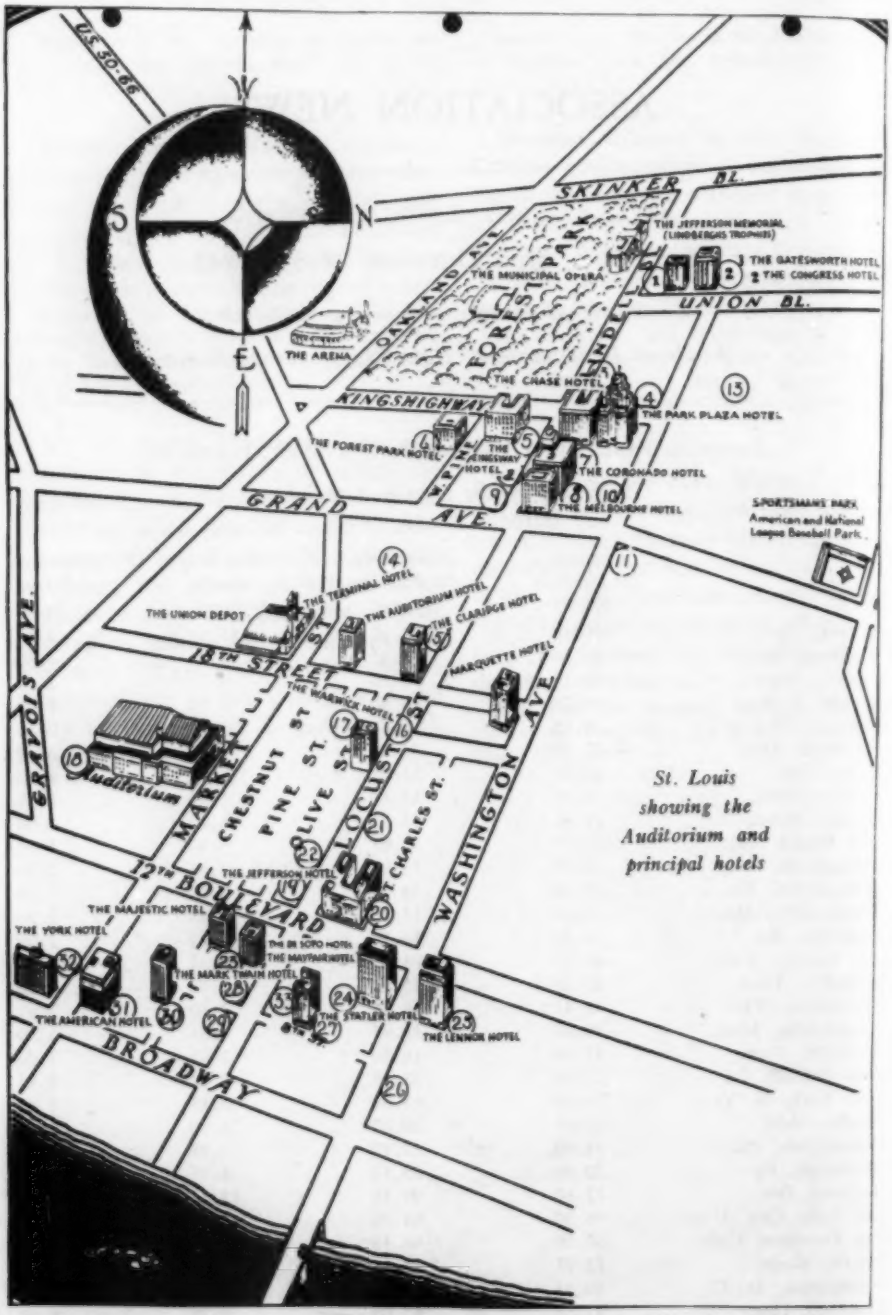
Meeting Headquarters: Municipal Auditorium

Residence Headquarters: Hotels Jefferson and Statler

RAILROAD FARES FROM VARIOUS POINTS TO ST. LOUIS, MO.

American Public Health Association
October 27–30, 1942

From	*One-way for Pullman Travel*	*Round-trip for Pullman Travel*	*One-way Lower Berth*	*One-way Upper Berth*
Atlanta, Ga.	$20.80	$31.20	$5.25	4.00
Baltimore, Md.	29.65	53.55	6.95	4.80
Boston, Mass.	40.10	72.20	9.25	6.40
Buffalo, N. Y.	23.70	43.80	5.80	4.40
Chicago, Ill.	9.65	14.45	2.95	2.20
Cleveland, Ohio	17.60	33.20	4.35	3.30
Dallas, Tex.	22.00	33.05	6.40	4.90
Denver, Colo.	30.05	45.10	7.90	5.95
Duluth, Minn.	23.95	35.95	6.40	4.90
Fort Worth, Tex.	22.45	33.65	6.40	4.90
Indianapolis, Ind.	8.20	16.05	2.95	2.00
Jacksonville, Fla.	31.10	46.65	8.10	6.20
Kansas City, Mo.	9.20	13.80	2.95	2.20
Louisville, Ky.	9.40	14.10	2.95	2.00
Los Angeles, Calif.	67.10	94.15	17.35	13.20
Memphis, Tenn.	10.25	15.40	2.95	2.20
Milwaukee, Wis.	12.45	18.65	3.50	2.65
Minneapolis, Minn.	19.30	28.95	4.35	3.30
Nashville, Tenn.	11.20	16.80	2.95	2.20
New Orleans, La.	25.60	38.45	6.80	5.15
New York, N. Y.	34.85	62.80	8.45	5.80
Omaha, Nebr.	13.85	20.80	3.50	2.65
Philadelphia, Pa.	31.90	57.40	7.85	5.40
Pittsburgh, Pa.	20.40	38.10	4.95	3.45
Portland, Ore.	72.10	94.15	17.35	13.20
Salt Lake City, Utah	46.30	64.70	11.90	9.05
San Francisco, Calif.	67.10	94.15	17.35	13.20
Seattle, Wash.	72.95	94.15	17.35	13.20
Washington, D. C.	29.65	53.55	6.95	4.80
Montreal, Que.	37.55	67.05	9.25	6.40
Halifax, N. S.	65.20	91.60	17.35	13.20
Ottawa, Ont.	34.25	61.60	8.45	5.80
Quebec, P. Q.	43.80	78.20	9.25	6.40
Toronto, Ont.	24.90	44.30	5.80	4.40
Vancouver, B. C.	72.95	94.15	17.35	13.20



American Hotel	31	Gatesworth Hotel	1	St. Louis University	9
Bishop Tuttle Memorial	19	Jefferson Hotel	20	Scruggs-Vandervoort-Barney	28
Board of Education	33	Kingsway Hotel	5	Sheldon Memorial	10
Chase Hotel	3	Lennox Hotel	25	Statler Hotel	24
Claridge Hotel	15	Mark Twain Hotel	30	Stix, Baer & Fuller	26
Congress Hotel	2	Mayfair Hotel	27	Third Baptist Church	11
Coronado Hotel	7	Melbourne Hotel	8	Vashon High School (Negro)	14
DeSoto Hotel	23	Municipal Auditorium	18	Warwick Hotel	17
Elks Club	12	Park Plaza Hotel	4	Y.M.C.A.	16
Famous-Barr	29	Public Library	22	York Hotel	32
Forest Park Hotel	6	Roosevelt Hotel	13	Y.W.C.A.	21

RATES QUOTED BY ST. LOUIS HOTELS

Seventy-First Annual Meeting, October 27 to 30, 1942

AMERICAN PUBLIC HEALTH ASSOCIATION

ALL RATES QUOTED ARE FOR ROOMS WITH BATH ON EUROPEAN PLAN

Hotel	*Single*	*Double*	*Suites*
New Hotel Jefferson	$3.00–5.00–6.00–7.00	$6.00–7.00–7.50–8.00	$12.00–20.00
Statler	3.00–3.50–3.75–4.00	5.25–6.00–6.25–6.50	17.00–18.00
	4.25–4.75–5.00	6.75–7.00–9.00	
American	2.00–2.50	3.50–4.00	
Claridge	2.50–3.00	3.50–7.00	
Coronado	2.25 (shower)	4.50–5.00	6.00
	2.75		
DeSoto	2.65–up	4.00–5.00	8.00
Lennox	3.50–4.00–4.50–5.00	4.50–5.00–6.00–7.00	10.50–14.50
	6.00	8.00	
Mark Twain	2.50–4.00	3.50–5.00–5.50	
Maryland	2.25–2.50–2.75	3.25–3.50–3.75–4.00	
		4.50	
(without bath)	1.75–2.00	2.75–3.00	
Mayfair	3.00–3.50–4.00–5.00	4.00–4.50–5.50–6.00	
		7.00	
Melbourne	2.65–3.20–3.70–4.20	4.20–4.80–5.30–5.80	
		6.20	
Park Plaza	4.50	6.00–8.00	12.00–18.00
Warwick	2.00–2.50–3.00	3.00–3.50–4.00–4.50	7.00–10.00
		5.00	

.....(Cut off on this line and mail to the hotel of your choice).....

HOTEL RESERVATION BLANK FOR THE ST. LOUIS MEETING AMERICAN PUBLIC HEALTH ASSOCIATION, OCTOBER 27–30, 1942

To .....
(Name of Hotel)

Please reserve for me ..... rooms for ..... persons for the A.P.H.A. Meeting.

Single room ..... Double room .....

Maximum rate per day for room $..... Minimum rate per day for room $.....

I expect to arrive ..... If date of arrival is changed I will notify you at least 24 hours in advance.

Please acknowledge this reservation.

Name .....

Street Address.....

City..... State.....

Preliminary Program of the Scientific Sessions of the 71st Annual Meeting of the American Public Health Association, and Meetings of Related Organizations, and of the Ninth Institute on Public Health Education

St. Louis, Mo.

October 24-30, 1942

THE Annual Meeting Program Committee offers a preview of the content of scientific sessions planned in connection with the 71st Annual Meeting in St. Louis, Mo. In many instances, sessions are complete. In others, places are purposely left open for important matters which may develop before October. Inaccuracies and omissions are to be expected and it is hoped they will be excused. The professional affiliations and addresses of speakers are not given, but a complete index to participants will be published in the final program which will be distributed to all delegates at the Registration Desk, Auditorium. Registration headquarters will be opened at 9:30 A.M. on Sunday, October 25.

THE NINTH INSTITUTE ON PUBLIC HEALTH EDUCATION

(Under the auspices of the Public Health Education Section of the American Public Health Association)

SATURDAY, SUNDAY, MONDAY, AND TUESDAY, A.M.

Saturday

6:30 P.M. Dinner Meeting for Leaders and Committee—Crystal Room, Hotel New Jefferson.

Leadership for Community Service.

Sunday

9:30 A.M. First General Session—Assembly Room 1, Auditorium.

Educational Qualifications for Health Educators. WILLIAM P. SHEPARD, M.D.

Objectives of Ninth Institute on Public Health Education. CLAIR E. TURNER, DR.P.H.

INSTITUTE ON PUBLIC HEALTH EDUCATION (Cont.)

Sunday

10:30 A.M. and 2:00 P.M.

Community Organization for Health Education

Assembly Room 1, Auditorium.

1. **Larger Urban Area.** WILTON L. HALVERSON, M.D., Leader.

Panel:
MARY P. CONNOLLY
LYNDE G. GATELY, M.D.
BLEECKER MARQUETTE
PHILIP L. RILEY

Committee Room 3A, Auditorium.

2. **Smaller Urban Area.** IRA V. HISCOCK, SC.D., Leader.

Panel:
SARAH S. DEITRICK, M.D.
JOSEPH H. HOWARD, M.D.
MARION MCKINNEY
CHARLES C. WILSON, M.D.

Committee Room 3B, Auditorium.

3. **Urban-Rural Area.** HAROLD H. WALKER, PH.D.

Panel:
Participants to be announced.

Committee Room 3D, Auditorium.

4. **Rural Area.** LUCY S. MORGAN, PH.D., Leader.

Panel:
E. G. MCGAVRAN, M.D.
Other participants to be announced.

Monday

9:30 A.M. Group Discussions with Leaders—Auditorium.

Committee Room 3A, Auditorium.

1. **Public Relations.** W. FORD HIGBY, Leader.

Assembly Room 1, Auditorium.

2. **School and Health Department Relationships.** MAYHEW DERRYBERRY, PH.D., Leader.

Periods for consultation with experts on local problems will also be arranged.

2:30 P. M. Second General Session—Assembly Room 1, Auditorium.

National War Programs and Their Objectives. MILTON ROSE, M.D., Leader.

3:30 P.M. Conducted Tours of the Exhibits under the auspices of the Committee on Scientific Exhibits—HOMER N. CALVER, *Chairman.*

INSTITUTE ON PUBLIC HEALTH EDUCATION (Cont.)

Tuesday

9:30 A.M. Third General Session—Opera House, Auditorium.

Highlights of the Institute.

Five Minute Summaries by Panel Leaders.

10:30 A.M.

Address: **Health Education in a Democracy.** C.-E. A. WINSLOW, DR.P.H.

Throughout the Institute, Educational Publicity Consulting Service in Health Education and Demonstrations of Source Material will be conducted under the auspices of the Social Work Publicity Council, MRS. SALLIE EVERSON BRIGHT, Executive Secretary, at Consultation Headquarters in the Auditorium.

NOTE: A final program of the Institute may be obtained from the Association office, 1790 Broadway, New York, N. Y. The registration fee is $3.00 for members of the American Public Health Association; and $6.00 for all others. Registration will be closed at the discretion of the Chairman, Benjamin G. Horning, M.D., and early enrollment is accordingly recommended.

OTHER SATURDAY, SUNDAY, AND MONDAY MEETINGS

AMERICAN SCHOOL HEALTH ASSOCIATION

Monday, *2:30 P.M. First General Session—Assembly Room 4, Auditorium.*

Presiding: EARL E. KLEINSCHMIDT, M.D., *President.*

ROUND TABLE ON HEARING IMPAIRMENT PROBLEMS

Scope of the Problem. CONRAD G. SELVIG.

State-wide Attack on the Problem. EMILY A. PRATT, M.D.

Discovery of Hearing Loss. CHARLES E. KINNEY, M.D.

Medical Follow-up of Hearing Impairments. HORACE NEWHART, M.D.

Development of a Program for Hard-of-Hearing Children in a City School System. Speaker to be announced.

Monday, *6:30 P.M. Dinner Session—Adam Room, Hotel Statler.*

Presiding: EARL E. KLEINSCHMIDT, M.D., *President.*

Address of Welcome. JOSEPH F. BREDECK, M.D.

EDUCATING FOR HEALTH

What the Superintendent Should Expect from the School Health Services. JOHN L. BRACKEN.

Administrative Procedures in the Implementation of the 1942 Yearbook of the American Association of School Administrators. WILLIAM J. HAMILTON.

AMERICAN SOCIAL HYGIENE ASSOCIATION

Sunday, *8:30 P.M. Ivory Room, Hotel New Jefferson.*

CONFERENCE OF MUNICIPAL PUBLIC HEALTH ENGINEERS

Monday, *9:30 A.M. Committee Room C, Auditorium.*

Committee Reports.
Water Supply
Housing
Malaria Control

Monday, *12:30 P.M. Luncheon Session—Room 1, Hotel New Jefferson.*
Business Session.

CONFERENCE OF MUNICIPAL PUBLIC HEALTH ENGINEERS AND CONFERENCE OF STATE SANITARY ENGINEERS

Monday, *2:30 P.M. Committee Room C, Auditorium.*

Presiding: C.-E. A. WINSLOW, DR.P.H.

TOOLS FOR THE ENGINEER IN DEALING WITH THE HOUSING PROBLEM

The Legal Control of Substandard Housing. C.-E. A. WINSLOW, DR.P.H.

The Appraisal of Substandard Housing. ALLAN A. TWICHELL.

The Opportunity for the Engineer. ABEL WOLMAN, DR.ENG., and ALFRED H. FLETCHER.

Discussion.

The Sanitary Engineer in Civilian Defense. RALPH E. TARBETT, C.E.

Discussion of A. S. C. E. Committee Report on the Sanitary Engineer. F. C. DUGAN, C.E.

CONFERENCE OF STATE AND PROVINCIAL PUBLIC HEALTH LABORATORY DIRECTORS

Monday, *9:30 A.M. and 2:30 P.M. Assembly Room 3, Auditorium.*

Monday, *12:30 P. M. Luncheon Session—Ivory Room, Hotel New Jefferson.*

CONFERENCE OF STATE DIRECTORS OF HEALTH EDUCATION

Monday, *9:30 A.M. and 2:30 P.M. Room 3, Hotel New Jefferson.*

CONFERENCE OF STATE DIRECTORS OF PUBLIC HEALTH NURSING

Monday, *9:30 A.M. and 2:30 P.M. Room 7, Hotel New Jefferson.*

CONFERENCE OF STATE SANITARY ENGINEERS

Sunday, *2:00 P.M. and 8:00 P.M. Room 7, Hotel New Jefferson.*

Monday, *9:00 A.M. Committee Room A, Auditorium.*

Monday, *8:00 P.M. Room 1, Hotel New Jefferson.*

EYE HEALTH CONFERENCE

Saturday, *9:30 A.M. and 2:30 P.M. Room 9, Hotel New Jefferson.*

Sunday, *9:30 A.M. and 2:30 P.M. Room 9, Hotel New Jefferson.*

Limited to 60 public health nurses, physicians, and health educators. Applications should be addressed to ELEANOR W. MUMFORD, R.N., Associate for Nursing, National Society for the Prevention of Blindness, 1790 Broadway, New York, N. Y.

ILLINOIS CONFERENCE ON PUBLIC HEALTH AND ILLINOIS PUBLIC HEALTH ASSOCIATION

Joint Session—Assembly Room 4, Auditorium

Monday, *2:30 P.M.*

Address. ROLAND R. CROSS, M.D.

Address. HENRY F. VAUGHAN, DR.P.H.

Address. HUNTINGTON WILLIAMS, M.D.

ILLINOIS PUBLIC HEALTH ASSOCIATION

Dinner Session—Hotel New Jefferson

Monday, *6:30 P.M.*

INTERNATIONAL SOCIETY OF MEDICAL HEALTH OFFICERS

Sunday, *2:30 P.M. Crystal Room, Hotel New Jefferson.*

Sunday, *6:30 P.M. Dinner Session—Crystal Room, Hotel New Jefferson.*

Monday, *9:30 A.M. Assembly Room 2, Auditorium.*

Monday, *2:00 P.M. Assembly Room 2, Auditorium.*

SYMPOSIUM ON OCCUPATIONAL DISEASES

(Sponsored by the Industrial Hygiene Section)

Sickness Proneness Among Industrial Workers. W. M. GAFAFER, D.Sc.

Discussion: H. C. HOUSTON.
Other speakers to be announced.

TEACHERS OF PREVENTIVE MEDICINE IN MEDICAL SCHOOLS

Monday, *9:30 A.M. Committee Room 3C, Auditorium.*

SESSIONS FROM TUESDAY, OCTOBER 27, TO FRIDAY, OCTOBER 30, INCLUSIVE

TUESDAY, 8:00 A.M.

CLEVELAND HEALTH MUSEUM

Breakfast Session—Room 4, Hotel New Jefferson

TUESDAY, 9:30 A.M.

EPIDEMIOLOGY

First Session—Committee Room C, Auditorium

Presiding: ALTON S. POPE, M.D., *Chairman.*

SYMPOSIUM ON SYPHILIS

Present Status of Venereal Disease Control in the Army. LIEUTENANT COLONEL THOMAS B. TURNER, M.C., and MAJOR WILLIAM A. BRUMFIELD, JR., M.C.

Prostitution in the Spread of Venereal Diseases in an Army Cantonment Area. BASCOM JOHNSON, JR., M.D.

The Epidemiology of Syphilis in Baltimore. RALPH F. SIKES, M.D.

Problems in the Epidemiology of Venereal Disease in War Time. THEODORE ROSENTHAL, M.D.

The Course of the Serologic Tests during Therapeutic Malaria in Patients with Syphilis. BERNARD I. KAPLAN, M.D., and I. JAY BRIGHTMAN, M.D.

INDUSTRIAL HYGIENE

First Session—Committee Room 3B, Auditorium

Presiding: WILLIAM P. YANT, *Chairman.*

Address of the Chairman. WILLIAM P. YANT.

SYMPOSIUM ON INDUSTRIAL HYGIENE AND WAR

The Industrial Hygiene Program of the Army Medical Corps. LIEUTENANT COLONEL A. J. LANZA, M.C.

The Program of the United States Navy. CAPTAIN C. S. STEPHENSON, U.S.N.

The Program of the United States Public Health Service. JAMES G. TOWNSEND, M.D.

Unexpected Occupational Disease Exposures During Wartime. JOHN J. PRENDERGAST, M.D.

TUESDAY, 9:30 A.M.

LABORATORY

First Session—Assembly Room 3, Auditorium

Presiding: JAMES GIBBARD, *Chairman.*

Section Business.

Report of the Coördinating Committee on Standard Methods. *Chairman,* LIEUTENANT COLONEL A. PARKER HITCHENS, M. C.

Report of the Standard Methods Committee on Diagnostic Procedures and Reagents. *Chairman,* WILLIAM D. STOVALL, M.D.

Report of the Standard Methods Committee on Biology of the Laboratory Animal. *Chairman,* COLONEL RAYMOND A. KELSER.

Report of the Standard Methods Committee on Biological Products. *Chairman,* LIEUTENANT COLONEL ELLIOTT S. ROBINSON, M.C.

Report of the Laboratory Section Representative on the Commission for the Study of Biological Stains. WILLIAM D. STOVALL, M.D.

Report of the Section Archivist. AUGUSTUS B. WADSWORTH, M.D.

Contributions of the Medical Corps of the Army to the Public Health Laboratory. COLONEL EDGAR ERSKINE HUME, M.C.

Food Handlers in the Army and Their Relationship to Salmonella Food Poisoning Outbreaks. LIEUTENANT COLONEL WILLIAM S. STONE, M.C.

Salmonella Typing in a Public Health Laboratory. EARLE K. BORMAN, KENNETH M. WHEELER, PH.D., EVELYN D. WEST, and FRIEND LEE MICKLE, SC.D.

An Outbreak of Typhoid Fever Due to the Small Colony Variety of Eberthella Typhosa. JANIE F. MORRIS.

ENGINEERING SECTION, CONFERENCE OF STATE SANITARY ENGINEERS, AND CONFERENCE OF MUNICIPAL PUBLIC HEALTH ENGINEERS

Joint Session—Assembly Room 2, Auditorium

Presiding: J. LLOYD BARRON, C.E., HOWARD D. SCHMIDT, and SOL PINCUS, C.E.

Report of the Committee on Water Supply. *Chairman,* ANSELMO F. DAPPERT.

Report of the Committee on Sewage Disposal. *Chairman,* LANGDON PEARSE.

Report of the Committee on Disinfection of Dishes and Utensils. *Chairman,* WALTER D. TIEDEMAN, M.C.E.

Report of the Committee on Plumbing. *Chairman,* JOEL I. CONNOLLY.

Public Health Problems Concerned in the Disposal of Garbage by Feeding It to Swine. WILLARD H. WRIGHT, PH.D.

TUESDAY, 9:30 A.M.

HEALTH OFFICERS

First Session—Assembly Room 1, Auditorium

Presiding: E. R. COFFEY, M.D., *Chairman.*

DEBATE: IS THE COUNTY THE EFFECTIVE ADMINISTRATIVE UNIT FOR FULL-TIME HEALTH SERVICES IN RURAL AREAS?

Referee: HARRY S. MUSTARD, M.D.

Team Captains: *Negative*—WALTER L. BIERRING, M.D.
Affirmative—To be announced.

Team Members to be announced.

Judges: The audience.

FOOD AND NUTRITION

First Session—Assembly Room 4, Auditorium

Presiding: HENRY T. SCOTT, PH.D., *Chairman.*

NUTRITION RESEARCH

Relation of Soil Depletion to Food Values. OUIDA DAVIS ABBOTT, PH.D.

The Physical Structure of Bone as Revealed by X-ray Diffraction Technic. C. I. REED, PH.D., and B. P. REED, PH.D.

Recognition of Vitamin Deficiencies in Human Beings. VICTOR E. LEVINE, M.D.

Allergy as a Problem of Public Health. FRENCH K. HANSEL, M.D.

Present Problem of Cereal Fortification. R. C. SHERWOOD, PH.D.

VITAL STATISTICS SECTION AND AMERICAN ASSOCIATION OF REGISTRATION EXECUTIVES

Joint Session—Committee Room 3A, Auditorium

Presiding: R. N. WHITFIELD, M.D., and J. T. MARSHALL.

WAR PROBLEMS IN REGISTRATION

Round table:

Review of the Vital Statistics Report. W. THURBER FALES, SC.D.

Committee on Vital Records. LOWELL J. REED, PH.D.
Other speakers to be announced.

TUESDAY, 12:30 P.M.

MATERNAL AND CHILD HEALTH

Luncheon Session—Crystal Room, Hotel New Jefferson

TUESDAY, 2:30 P.M.

HEALTH OFFICERS, LABORATORY, AND EPIDEMIOLOGY SECTIONS

Joint Session—Opera House, Auditorium

Presiding: E. R. COFFEY, M.D., JAMES GIBBARD, and ALTON S. POPE, M.D.

IMMUNIZATION

Tetanus Toxoid, Its Use in the United States Army. MAJOR ARTHUR P. LONG, M.C.

Tetanus Toxoid and Its Use for Active Immunization. DONALD T. FRASER, M.B., D.P.H., HELEN C. PLUMMER, PH.D., and M. D. ORR.

Immunization Against Typhus Fever. HERALD R. COX, SC.D.

Typhoid Vaccine Studies VII: Typhoid-Paratyphoid Vaccine. LIEUTENANT COLONEL DON LONGFELLOW, M.C., and CAPTAIN GEORGE F. LUIPPOLD, SN.C.

Vaccination Against Encephalitis. FREDERICK W. JACKSON, M.D.

PUBLIC HEALTH EDUCATION

First Session—Assembly Room 3, Auditorium

Presiding: SALLY LUCAS JEAN, *Chairman.*

Section Business.

Report of the Nominating Committee.

EDUCATIONAL PREPARATION FOR HEALTH EDUCATION

The Recent Report of the Subcommittee on the Educational Qualifications of Health Educators of the Committee on Professional Education. *Chairman,* CLAIR E. TURNER, DR.P.H.

What Do Administrators Expect of Health Educational Personnel? Speaker to be announced.

Field Experience for Health Educational Personnel.

a. *Internships—Cleveland Health Museum.* BRUNO GEBHARD, M.D.

b. *Community Field Training—Wayne University.* MINNIE KRUEGER OED.

Discussion.

TUESDAY, 2:30 P.M.

VITAL STATISTICS AND MATERNAL AND CHILD HEALTH SECTIONS

Joint Session—Assembly Room 4, Auditorium

Presiding: R. N. WHITFIELD, M.D., and CHARLES C. WILSON, M.D.

USE OF SPECIAL INFORMATION

Reliability of the Supplementary Information on the Certificate. Speaker to be announced.

How Can Statistical Data Be Used in Planning Maternal and Child Health and Crippled Children's Programs? AMY HUNTER, M.D., and WILLIAM KEETTEL, M.D.

Uses Made of the Information, and Potential Uses. Speaker to be announced.

ENGINEERING

First Session—Assembly Room 1, Auditorium

Presiding: J. LLOYD BARRON, C.E., *Chairman.*

Public Health Implications in City and Regional Planning. HARLAND BARTHOLOMEW.

Accomplishments in Smoke Control. RAYMOND R. TUCKER.

An Expanded Service in Industrial Hygiene through Coördinated Effort. KENNETH J. WULFERT.

Environmental Sanitation Activities in the 7th Corps Area. CAPTAIN HERBERT M. BOSCH.

FOOD AND NUTRITION

Second Session—Assembly Room 2, Auditorium

MILK AND DAIRY PRODUCTS

Comparative Nutritive Value of Vegetable Oils with Butter Fat. E. B. HART.

Technical Problems Involved in the Manufacture and Distribution of Homogenized Milk. P. H. TRACY.

Protein in the Diet of Man. ICIE MACY HOOBLER, PH.D.

Milk in the Diets of College Students. HUGHINA MCKAY.

Regulating Milk and Milk Products. (Report of the Committee on Milk and Dairy Products.) *Chairman,* J. A. KEENAN, PH.D.

TUESDAY, 2:30 P.M.

PUBLIC HEALTH NURSING

First Session—Committee Room C, Auditorium

Presiding: ALMA C. HAUPT, R.N., *Chairman.*

Section Business.

Reports of Section Committees.

Nurses in Civilian Defense. MARIAN G. RANDALL, R.N.

Community Nursing Service. HORTENSE HILBERT, R.N.

TUESDAY, 8:30 P.M.

FIRST GENERAL SESSION

Opera House, Auditorium

Presiding: JOHN L. RICE, M.D., *President,* American Public Health Association.

Addresses of Welcome:
HONORABLE WILLIAM DEE BECKER, Mayor of St. Louis
HONORABLE HENRY S. CAULFIELD, Director of Public Welfare
HONORABLE JOSEPH F. BREDECK, M.D., Commissioner of Health

Presidential Address. ALLEN W. FREEMAN, M.D., *President-elect,* American Public Health Association.

Address. THE RIGHT HONORABLE MALCOLM MACDONALD.

Announcement of Sedgwick Memorial Medal Award.

Reception to the President and President-elect.

WEDNESDAY, 8:00 A.M.

AMERICAN SCHOOL HEALTH ASSOCIATION

Breakfast Session—Adam Room, Hotel Statler

Presiding: HELEN AHRENS CARY, M.D.

Report of the Committee on Childhood Tuberculosis. *Chairman,* J. A. MYERS, M.D.

HARVARD UNIVERSITY ALUMNI

Breakfast Session—Crystal Room, Hotel New Jefferson

UNIVERSITY OF MICHIGAN ALUMNI

Breakfast Session—Ivory Room, Hotel New Jefferson

YALE UNIVERSITY ALUMNI

Breakfast Session—Room 1, Hotel New Jefferson

WEDNESDAY, 9:30 A.M.

HEALTH OFFICERS

Second Session—Assembly Room 2, Auditorium

RESEARCH AND RECORDS

The Single Line Index as an Administrative Aid. V. A. VAN VOLKENBURGH, M.D.

Health Department Control of Substandard Housing: Reports of the Committee on the Hygiene of Housing.

A New Survey Procedure. ALLAN A. TWICHELL, *Technical Secretary.*

Principles of Legal Control. C.-E. A. WINSLOW, DR.P.H., *Chairman*

Field Observations of Tuberculosis Patients in the Rural Areas of Tennessee. R. S. GASS, M.D., ANN DILLON, and W. C. WILLIAMS, M.D.

INDUSTRIAL HYGIENE

Second Session—Committee Room C, Auditorium

SYMPOSIUM ON TRAINING OF INDUSTRIAL HYGIENE PERSONNEL

The Training of the Physician. CARL M. PETERSON, M.D.

Discussion.

The Training of the Hygienist. THEODORE F. HATCH.

Discussion.

Undergraduate Training. MILTON H. KRONENBERG, M.D.

Discussion.

MATERNAL AND CHILD HEALTH

First Session—Assembly Room 4, Auditorium

Presiding: CHARLES C. WILSON, M.D., *Chairman.*

A PUBLIC PROGRAM OF OUTPATIENT SERVICES FOR CHILDREN WITH CEREBRAL PALSY

Panel Leader: WINTHROP PHELPS, M.D.

Participants to be announced.

WEDNESDAY, 9:30 A.M.

LABORATORY, ENGINEERING, AND EPIDEMIOLOGY SECTIONS

Joint Session—Assembly Room 1, Auditorium

Presiding: JAMES GIBBARD, J. LLOYD BARRON, C.E., and ALTON S. POPE, M.D.

SYMPOSIUM ON WATER AND MILK-BORNE INFECTIONS

The Hypothetical Relationship of Water Supplies to Poliomyelitis. KENNETH F. MAXCY, M.D.

Safety of the Milk Supply and Reduced Mortality. HERMAN N. BUNDESEN, M.D., and PAUL F. KRUEGER.

Brucellosis: Consideration of Its Epidemiology, Diagnosis and Control. CARL F. JORDAN, M.D., I. H. BORTS, M.D., D. M. HARRIS, M.D., and J. R. JENNINGS, C.E.

Field and Laboratory Studies on Water-borne Gastroenteritis. RALPH E. WHEELER, M.D., and ROY C. AVERY.

LABORATORY

Second Session—Committee Room C, Auditorium

Presiding: PEARL L. KENDRICK, SC.D.

The Isolation of Neisseria flava from the Genitourinary Tract of Three Patients. CHARLES M. CARPENTER, M.D.

A Report on Methods of Transmitting Material to a Laboratory for Gonococcus Cultural Studies. OSCAR F. COX, M.D., and MARY V. MCDERMOTT.

Reversibility of Sensitization of Erythrocytes. G. M. KALMANSON, PH.D., and J. J. BRONFENBRENNER, DR.P.H.

Four Years' Use of the Kahn Presumptive Test as a Screening Agency in the Serology of Syphilis. E. L. WEBB.

Studies on the Kahn Verification Test. ELIZABETH B. MCDERMOTT, JACOB ADLER, M.D., STANLEY MARCUS, ELLA BRANDON, HOWARD J. NUNES, and REUBEN L. KAHN, SC.D.

The Effect of Age of Specimens on the Results of Serological Tests for Syphilis. ANNE KIMBALL, PH.D.

ORAL HEALTH GROUP

First Session—Committee Room 3C, Auditorium

Presiding: ALLEN O. GRUEBBEL, D.D.S., *Chairman.*

WEDNESDAY, 9:30 A.M.

FOOD AND NUTRITION

Third Session—Committee Room 3C, Auditorium

Report of the Coördinating Committee. *Chairman,* F. C. BLANCK, PH.D.

Report of the Committee on Microbiological Examination of Foods. *Chairman,* HARRY E. GORESLINE, PH.D.

Report of the Committee on Nutritional Problems. *Chairman,* E. V. MCCOLLUM, PH.D.

Report of the Committee on Foods (Except Milk). *Chairman,* BERNARD E. PROCTOR, PH.D.

Report of the Joint Committee on Analyzing Frozen Desserts. *Chairman,* FREDERICK W. FABIAN, PH.D., and *Chairman,* FRIEND LEE MICKLE, SC.D.

Report of the Committee on Food Utensil Sanitation. *Chairman,* GEORGE J. HUCKER, PH.D.

Report of the Committee on Assay of Foods. *Chairman,* CARL R. FELLERS, PH.D.

Report of the Committee on Membership and Fellowship. *Chairman,* RACHEL L. REED.

PUBLIC HEALTH EDUCATION

Second Session—Assembly Room 3, Auditorium

Presiding: D. OBERTEUFFER, PH.D.

HEALTH EDUCATION, WAR AND DEFENSE

First Aid Instruction in Relation to Health Education. ALBERT MCCOWN, M.D.

Health Education in Extra-Cantonment Zones. Speaker to be announced.

Health Education in the National Nutrition Program. Speaker to be announced.

Discussion.

WEDNESDAY, 11:30 A.M.

Second General Session—Opera House, Auditorium

Presiding:

WAR AND THE HEALTH DEPARTMENT

Across the Nation. Speaker to be announced.

In an Eastern City. Speaker to be announced.

In a Western County. Speaker to be announced.

WEDNESDAY, 12:30 P.M.

INDUSTRIAL HYGIENE

Luncheon Session—Crystal Room, Hotel New Jefferson

Address: A representative of Great Britain.

Report of the Committee on Skin Irritants. *Chairman,* LOUIS SCHWARTZ, M.D.

Report of the Committee on Ventilation and Atmospheric Pollution. *Chairman,* EMERY R. HAYHURST, M.D.

Report of the Committee on Standard Methods for the Examination of Air. *Chairman,* EMERY R. HAYHURST, M.D.

Report of the Committee on Lead Poisoning. *Chairman,* ROBERT A. KEHOE, M.D.

Report of the Committee on Pneumoconiosis. *Chairman,* R. R. SAYERS, M.D.

Report of the Committee on Industrial Anthrax. *Chairman,* HENRY FIELD SMYTH, M.D.

Report of the Committee on Volatile Solvents. *Chairman,* HENRY FIELD SMYTH, JR., M.D.

AMERICAN SCHOOL HEALTH ASSOCIATION AND ORAL HEALTH GROUP

Joint Luncheon Session—Roof Garden, Hotel Statler

Presiding: ARTHUR R. TURNER, M.D., and ALLEN O. GRUEBBEL, D.D.S.

What Is the Private Dentist's Part in the School Health Program? GEORGE M. WHEATLEY, M.D.

FOOD AND NUTRITION

Luncheon Session—Ivory Room, Hotel New Jefferson

Program to be announced.

JOHNS HOPKINS UNIVERSITY ALUMNI

Luncheon Session—Room 1, Hotel New Jefferson

WEDNESDAY, 2:30 P.M.

PROFESSIONAL EDUCATION

Special Session—Assembly Room 2, Auditorium

Presiding: WILLIAM P. SHEPARD, M.D., *Chairman,* Committee on Professional Education.

Program to be announced.

WEDNESDAY, 2:30 P.M.

LABORATORY

Third Session—Assembly Room 1, Auditorium

Section Business.

Report of the Standard Methods Committee for the Examination of Disinfectants and Antiseptics. *Chairman,* STUART MUDD, M.D.

Germicidal Vapors as a Means of Disinfection of Air. O. H. ROBERTSON, M.D.

Ultra-Violet Irradiation as a Means of Disinfection of Air. ALEXANDER HOLLAENDER, PH.D.

Relation of Length of Carbon Chain to the Primary and Functional Toxicities of Alcohols. HENRY WELCH, PH.D., and G. G. SLOCUM, PH.D.

Changes in the Bacterial Cell Brought About by the Action of Germicides as Demonstrated by the Electron Microscope. STUART MUDD, M.D.

Variations in Phenol Coefficient Determinations of Certain Disinfectants. CHARLES M. BREWER, PH.D.

Bacterial Contaminations in Sulfonamide Products. C. VIRGINIA FISHER, PH.D., N. J. ACCOUSTI, and MARVIN R. THOMPSON, PH.D.

PUBLIC HEALTH EDUCATION AND PUBLIC HEALTH NURSING SECTIONS AND AMERICAN SCHOOL HEALTH ASSOCIATION

Joint Session—Opera House, Auditorium

Presiding: SALLY LUCAS JEAN, ALMA C. HAUPT, R.N., and CHARLES H. KEENE, M.D.

COMMUNITY ORGANIZATION FOR HEALTH EDUCATION

The Florida State-wide Public Health Committee. JEAN HENDERSON.

The Nine Counties in Michigan. Speaker to be announced.

Health Education in a Medium Urban Community. EARLE G. BROWN, M.D.

The Nurse's Part in Health Education. Speaker to be announced.

ENGINEERING

Second Session—Committee Room 3B, Auditorium

Burma Road Sanitation. ARTHUR MORRILL and H. A. JOHNSON.

SYMPOSIUM ON INTER-AMERICAN SANITARY ENGINEERING

Led by Sanitary Engineers from South America

Army Water Supply Problems. LIEUTENANT COLONEL JACK J. HINMAN, JR.

WEDNESDAY, 2:30 P.M.

VITAL STATISTICS

First Session—Committee Room 3A, Auditorium

Presiding: R. N. WHITFIELD, M.D., *Chairman.*

Section Business.

Residence Allocation in Connection with Deaths in the Military Service. Speaker to be announced.

Discussion.

Migration: Especially Its Effect on Population Estimates. Speaker to be announced.

Discussion.

FOOD AND NUTRITION

Fourth Session—Assembly Room 3, Auditorium

SYMPOSIUM ON NUTRITIVE VALUES OF DRIED AND DEHYDRATED FRUITS AND VEGETABLES

Home Drying Methods and Their Effect on the Palatability, Cooking Quality, and Nutritive Value of Foods. ESTHER L. BATCHELDER, PH.D.

Dehydration Procedures and Their Effect on Vitamin Retention. E. M. CHACE.

Losses of Vitamins Which May Occur During the Storage of Dehydrated Vegetables. D. K. TRESSLER, PH.D., J. C. MOYER, and KATHERINE A. WHEELER.

Losses of Vitamins Which May Occur During the Cooking of Dehydrated Vegetables. FAITH FENTON, BARBARA BARNES, J. C. MOYER, and KATHERINE A. WHEELER.

EPIDEMIOLOGY

Second Session—Committee Room 3C, Auditorium

SYMPOSIUM ON TUBERCULOSIS

Tuberculosis Survey among the Employees of Santiago, Chile. BENJAMIN VIEL, M.D., and EDUARDO JELIC, M.D.

Pulmonary Tuberculosis Resulting from Extra-Familial Contacts. CLAIRE W. TWINAM, M.D., and ALTON S. POPE, M.D.

Infection, Morbidity and Mortality among Associates of Cases of Tuberculosis in Old Age. HOWARD C. STEWART, M.D., R. S. GASS, M.D., and W. C. WILLIAMS, M.D.

Initial X-ray Findings and Subsequent Mortality from Tuberculosis in Infected White and Colored Children of Various Ages. MIRIAM E. BRAILEY, M.D.

Some Epidemiological Aspects of Tuberculosis Determined by Analysis of Sanatorium Records. ROY M. SEIDEMAN, M.D.

Tuberculosis Follow-up in Westchester County. GEORGE H. RAMSEY, M.D., and MARJORIE BELLOWS.

WEDNESDAY, 6:30 P.M.

ENGINEERING SECTION, CONFERENCE OF STATE SANITARY ENGINEERS, AND CONFERENCE OF MUNICIPAL PUBLIC HEALTH ENGINEERS

Annual Engineers' Stag Dinner—Ivory Room, Hotel New Jefferson

PUBLIC HEALTH EDUCATION

Dinner Session—Crystal Room, Hotel New Jefferson

Presiding: SALLY LUCAS JEAN.

GOODWILL SESSION

Section Business.

A Health Education Program in Industry. EDWARD A. POOLE.

THURSDAY, 8:00 A.M.

AMERICAN SCHOOL HEALTH ASSOCIATION

Breakfast Session—Adam Room, Hotel Statler

Presiding: EARL E. KLEINSCHMIDT, M.D., *President.*

Committee Reports:

National Defense
Physical Fitness
Professional Education
Committee coöperating with United States Office of Education Wartime Commission
Committee coöperating with Dictionary of Education
Nominating

AMEROPS

Breakfast Session—Room 3, Hotel New Jefferson

GEORGE PEABODY COLLEGE FOR TEACHERS ALUMNAE

Breakfast Session—Room 1, Hotel New Jefferson

MASSACHUSETTS INSTITUTE OF TECHNOLOGY ALUMNI

Breakfast Session—Crystal Room, Hotel New Jefferson

UNIVERSITY OF MINNESOTA ALUMNI

Breakfast Session—Room 9, Hotel New Jefferson

THURSDAY, 9:30 A.M.

LABORATORY

Fourth Session—Assembly Room 2, Auditorium

Presiding: WALTER L. MALLMANN, PH.D.

Report of the Standard Methods Committee on Examination of Water and Sewage. *Chairman,* WALTER L. MALLMANN, PH.D.

Report of the Standard Methods Committee for the Examination of Shellfish. *Chairman,* JAMES GIBBARD.

Progress Report on Methods of Analysis for Iodine in Water. JOHN T. TRIPP, PH.D.

Laboratory Methods for the Sanitary Evaluation of Shellfish. LESLIE A. SANDHOLZER, PH.D.

A Comparative Study of Presumptive and Confirmative Media for Bacteria of the Coliform Group and for Fecal Streptococci. A. A. HAJNA and C. A. PERRY, SC.D.

A Comparison of Methods Employed in the Detection of Coliform Bacteria in Milk. LESLIE A. SANDHOLZER, PH.D., MILDRED K. HAVENS, ALICE WALKER, and MARY STRONG.

Irregularities in Agar Plate Counts of Pasteurized Milk. W. L. WILLIAMS.

INDUSTRIAL HYGIENE

Third Session—Assembly Room 3, Auditorium

SYMPOSIUM ON CHEMICAL AND ENGINEERING METHODS IN INDUSTRIAL HYGIENE

Newer Problems in Industrial Ventilation. W. C. L. HEMEON.

A Critical Study of the Phenyldisulfonic Acid Method for the Determination of the Oxides of Nitrogen. Speaker to be announced.

The Determination of Halogenated Hydrocarbons. FREDERICK H. GOLDMAN, PH.D.

The Collection, Determination, and Identification of Solvent Vapors. WILLIAM G. FREDRICK, SC.D.

A Practical Housekeeping Program for Industry. HERBERT G. DYKTOR.

MATERNAL AND CHILD HEALTH

Third Session—Rooms 2, 7, and 8, Hotel New Jefferson

Round Tables (three running simultaneously).

THE ESTABLISHMENT AND MAINTENANCE OF NORMAL APPETITE AS A MAJOR FACTOR IN THE PREVENTION OF MALNUTRITION

Program to be announced.

THURSDAY, 9:30 A.M.

LABORATORY AND EPIDEMIOLOGY SECTIONS

Joint Session—Assembly Room 1, Auditorium

Presiding: JAMES GIBBARD and ALTON S. POPE, M.D.

SYMPOSIUM ON RESPIRATORY DISEASES

The Epidemiology of Streptococcic Infections. FRANCIS F. SCHWENTKER, M.D. and JOHN H. JANNEY, M.D.

The Work of the Meningitis Commission. JOHN J. PHAIR, M.D., LIEUTENANT COLONEL A. PARKER HITCHENS, M.C., ELVIN A. KABAT, MARY B. KIRKBRIDE, SC.D., PERRIN H. LONG, M.D., and C. PHILIP MILLER.

Epidemiological Problems Presented by World-wide Distribution of Troops. L. T. COGGESHALL, M.D.

Milk-borne Epidemics Due to Serologically Typed Hemolytic Streptococci. T. D. DUBLIN, M.D.

Immunization Against Scarlet Fever. GAYLORD W. ANDERSON, M.D.

Precipitin and Agglutinin Formation in the Blood of Streptococcus Infected Patients and Their Family Contacts. PARKER DOOLEY, M.D. and HELEN V. KARR.

FOOD AND NUTRITION SECTION AND AMERICAN SCHOOL HEALTH ASSOCIATION

Joint Session—Assembly Room 4, Auditorium

Presiding: HENRY T. SCOTT, PH.D., and AMOS L. BEAGHLER, M.D.

NUTRITION AND HEALTH IN TIME OF WAR

Nutritional Needs of American Youth. H. D. KRUSE, M.D.

National Nutrition in Relation to Selective Service. BRIGADIER GENERAL LEWIS B. HERSHEY.

Dental Defects in Children. RUTH E. MARTIN, D.D.S.

The Outlook for the Future in War Economy. RICHARD W. VILTER, M.D.

HEALTH OFFICERS, ENGINEERING, AND PUBLIC HEALTH NURSING SECTIONS

Joint Session—Opera House, Auditorium

Presiding: ABEL WOLMAN, DR.ENG.

GEARING PUBLIC HEALTH TO MEET WARTIME CONDITIONS

Panel:

Health Officers—E. R. COFFEY, M.D., and WILTON L. HALVERSON, M.D.

Engineers—ARTHUR P. MILLER, C.E. Other participants to be announced.

Public Health Nurses—MARIAN SHEAHAN, R.N. Other participants to be announced.

Oral Health Group—WALTER PELTON, D.D.S.

THURSDAY, 12:30 P.M.

PUBLIC HEALTH EDUCATION

Luncheon Session—Crystal Room, Hotel New Jefferson

Health Education and the Schools. HOMER W. ANDERSON.

DELTA OMEGA

Luncheon Session—Ivory Room, Hotel New Jefferson

THURSDAY, 2:30 P.M.

HEALTH OFFICERS AND ENGINEERING SECTIONS

Joint Session—Opera House, Auditorium

Presiding: SAMUEL L. SALASIN, M.D., and ROY J. MORTON.

SYMPOSIUM ON ENVIRONMENTAL SANITATION

Present Epidemiological Basis of Environmental Sanitation. GAYLORD W. ANDERSON, M.D.

Discussion: EDWARD S. GODFREY, JR., M.D.

Joint Responsibilities and Indirect Services of the Health Department. J. LLOYD BARRON, C.E.

Discussion: L. M. GRAVES, M.D.

Basic Criteria for Qualified Leadership in the Environmental Sanitation Program. FELIX J. UNDERWOOD, M.D.

Discussion: H. G. BAITY, SC.D.

MATERNAL AND CHILD HEALTH

Third Session—Assembly Room 4, Auditorium

THE LOCAL HEALTH ADMINISTRATOR TAKES A LONG LOOK AT SCHOOL HEALTH SERVICES

Program to be announced.

INDUSTRIAL HYGIENE

Fourth Session—Assembly Room 3, Auditorium

Acute Toxicity of Ethylene Glycol Ethers. HAROLD W. WERNER, PH.D.

Physiological Response to Magnesium Dust. LEROY U. GARDNER, M.D.

Monomeric Styrene. DON D. IRISH, PH.D.

Eye Hazards in Industry and Their Control—An Industrial Health Problem. Speaker to be announced.

THURSDAY, 2:30 P.M.

LABORATORY

Fifth Session—Assembly Room 1, Auditorium

Presiding: FRIEND LEE MICKLE, SC.D.

Report of the Standard Methods Committee on Examination of Dairy Products. *Chairman,* ROBERT S. BREED, PH.D.

Report of the Standard Methods Committee for Frozen Desserts and Ingredients. *Chairman,* FRIEND LEE MICKLE, SC.D.

THE LABORATORY CONTROL OF MILK UNDER WAR CONDITIONS

Discussion Panel:

ROBERT S. BREED, PH.D.
A. W. FUCHS, C.E.
C. K. JOHNS, PH.D.
H. SCHARER
R. V. STONE, D.V.M.
WALTER D. TIEDEMAN, M.C.E.

LABORATORY

Sixth Session—Committee Room 3A, Auditorium

Presiding: LIEUTENANT COLONEL ELLIOTT S. ROBINSON, M.C.

Blood and Malaria Parasite Staining with Eosin Azure Methylene Blue Methods. R. D. LILLIE, M.D.

The Etiology of Acute Illness Among Workers Using Low-grade Stained Cotton. ROY SCHNEITER, PAUL A. NEAL, M.D., and BARBARA H. CAMINITA.

Laboratory Aids in the Diagnosis of Virus Diseases. S. EDWARD SULKIN, PH.D., and CARL G. HARFORD, M.D.

A Rapid Laboratory Test for Early Diagnosis of Lymphocytic Choriomeningitis. JOSEPH ZICHIS, PH.D.

Types of Hemolytic Streptococci Found in Scarlet Fever. LILLIAN BUXBAUM and PAUL A. DI SANT'AGNESE, M.D.

THURSDAY, 2:30 P.M.

VITAL STATISTICS

Second Session—Committee Room C, Auditorium

Committee Reports.

Errors in Clinical Statements on Causes of Death—Part II. (Continuation of work reported last year.) HAVEN EMERSON, M.D. and KURT POHLEN, PH.D.

Accuracy of Tuberculosis Death Rates in Williamson County, Tennessee. RUTH R. PUFFER, HOWARD C. STEWART, M.D., and W. C. WILLIAMS, M.D.

FOOD AND NUTRITION AND PUBLIC HEALTH NURSING SECTIONS

Joint Session—Opera House, Auditorium

Presiding: HENRY T. SCOTT, PH.D., and ALMA C. HAUPT, R.N.

The New Public Health Nursing Curriculum. MARY J. DUNN.

Teaching the Family Sane Nutrition. Speaker to be announced.

Discussion.

THURSDAY, 7:00 P.M.

THIRD GENERAL SESSION

Annual Banquet—Gold Room, Hotel New Jefferson

Presiding: JOHN L. RICE, M.D., *President,* American Public Health Association.

Presentation of Forty Year Membership Certificates.

Announcement of Health Conservation Contest Awards.

FRIDAY, 9:30 A.M.

LABORATORY

Seventh Session—Committee Room 3A, Auditorium

Presiding: ROBERT S. BREED, PH.D.

Some Observations on Mold Mycelia in Cream and Butter. H. C. OLSON, PH.D.

Heat Resistant Organisms in Milk Supplies. W. D. DOTTERRER.

Trends in Laboratory Procedures in the Milk Control Program of St. Louis. JANE HERSHEY, PH.D., HARRY WALDRIP, and JOSEPH C. WILLETT, D.V.M.

Milk Laboratories in Defense Areas. LUTHER A. BLACK, PH.D.

Recent Advances and Present Problems in Milk Sanitation:
In Mexico
In Cuba
In Puerto Rico
Speakers to be announced.

LABORATORY

Eighth Session—Committee Room C, Auditorium

Method of Assay and Preparation of Bacterial Pyrogen. HENRY WELCH, PH.D., H. O. CALVERY, PH.D., W. T. MCCLOSKY, and C. W. PRICE.

Studies on Pertussis Endotoxin with the Use of Semi-Synthetic Media. LYON P. STREAN, PH.D.

Results of Use of the Agglutinogenic Intradermal Test for Susceptibility to Whooping Cough. EARL W. FLOSDORF, PH.D., HARRIET C. FELTON, M.D., A. BONDI, PH.D., and AIMS C. MCGUINNESS, M.D.

Evaluation of the Antigenicity of Tetanus Toxoid. W. L. KOERBER, PH.D.

The Development and Management of a Cotton Rat Colony. D. B. MEYER, D.V.M., and M. MARSH.

MATERNAL AND CHILD HEALTH

Fourth Session—Committee Room 3C, Auditorium

MATERNAL AND CHILD HEALTH SERVICES IN WAR TIME

Health Standards for Day-Care Centers for Children. Speaker to be announced.

Evacuation Planning for Mothers and Children. Speaker to be announced.

Medical Care for Dependents of Men in Military Service. Speaker to be announced.

FRIDAY, 9:30 A.M.

EPIDEMIOLOGY

Third Session—Assembly Room 3, Auditorium

Epidemiology of Plague in Ecuador. ATILIO MACCHIAVELLO, M.D.

Poliomyelitis in Cuyahoga County, Ohio, 1941. MORTON KRAMER, JOHN A. TOOMEY, M.D., HAROLD J. KNAPP, M.D., and JAMES A. DOULL, M.D.

Epidemiological Aspects of Dental Caries. BION R. EAST, D.D.S.

Epidemiology of Pneumococcus Pneumonia: A Study, Including Bacteriological and Serological Observations, in a Rural Community during a Season of High Incidence. EDWARD S. ROGERS, M.D., ANNE M. BAHLKE, M.D., and ALBERT H. HARRIS, 2ND, M.D.

An Outbreak of Staphylococcal Food Poisoning. J. EARL SMITH, M.D., and NATHAN NAGLE.

AMERICAN SCHOOL HEALTH ASSOCIATION

Second General Session—Committee Room 3B, Auditorium

Presiding: S. B. MCPHEETERS, M.D.

THE MASSACHUSETTS STUDY OF HEALTH IN SENIOR HIGH SCHOOLS

Health Status and Need for Health Service Programs. JEAN V. LATIMER.

Testing Technics and Procedures. WARREN H. SOUTHWORTH.

Significant Findings of the Study and Their Relation to Planning Health Education Programs. CLAIR E. TURNER, DR.P.H.

ENGINEERING

Third Session—Assembly Room 2, Auditorium

The Privy and National Public Health. ROY N. JOHNSTON.

The Development of a High Rate Activated Sludge Process Through Recirculation. JOHN ALEXANDER LOGAN, D.SC.

Disinfection of Air. W. F. WELLS.

The Relationship between Coliform Organisms and the Typhoid Group. ROBERT WEBSTER KEHR, C.E.

Occurrence of the Escherichia, Aerobacter and Intermediate Sections of the Coliform Group in Oysters Taken from Rhode Island and Nearby Waters. DOROTHY BAUMES PHELPS. (To be read by title only.)

FRIDAY, 9:30 A.M.

INDUSTRIAL HYGIENE AND FOOD AND NUTRITION SECTIONS

Joint Session—Assembly Room 1, Auditorium

Presiding: WILLIAM P. YANT and HENRY T. SCOTT, PH.D.

Food and Nutrition of the Industrial Worker in Wartime. FRANK G. BOUDREAU, M.D.

Teaching Nutrition to the Families of Industrial Workers. EVELYN HOLLEN.

The Functions of Nurses in Industry. OLIVE M. WHITLOCK, R.N.

Improved Dental Health for Workers. LYMAN D. HEACOCK, D.D.S.

FRIDAY, 11:30 A.M.

FOURTH GENERAL SESSION

Assembly Room 4, Auditorium

HEALTH COUNCILS AND PRIVATE AGENCIES

Presiding: HOMER FOLKS, LL.D.

Speakers:

LOUIS I. DUBLIN, PH.D.
SELSKAR M. GUNN
PHILIP S. PLATT, PH.D.

FRIDAY, 12:30 P.M.

NATIONAL ORGANIZATION FOR PUBLIC HEALTH NURSING

Luncheon Session—Ivory Room, Hotel New Jefferson

FRIDAY, 2:30 P.M.

FIFTH GENERAL SESSION

Assembly Room 1, Auditorium

HIGHLIGHTS OF THE 71ST ANNUAL MEETING

A SUMMARY OF THE SCIENTIFIC SESSIONS

Presiding: REGINALD M. ATWATER, M.D.

Panel Participants:

A spokesman from each of the ten Sections.

THE TECHNICAL EXHIBITS

AUDITORIUM

EXHIBITORS in the Twenty-Fourth Health Exhibit, sponsored by the American Public Health Association in connection with its 71st Annual Meeting, describe the exhibits they are preparing for the information of delegates as follows:

A. S. ALOE COMPANY

ST. LOUIS, MO. NOS. 78 AND 79

Laboratory apparatus and equipment of interest to the Public Health and allied worker. Modern equipment for the preparation of human blood plasma and its administration will be shown. The new Chapple Infant Incubator, having complete environmental control, will be on exhibit and will be demonstrated. New and recent scientific apparatus, serological water baths, apparatus for industrial hygiene tests—such as equipment for the determination of lead in blood and urine—will also be presented.

AMERICAN BOTTLERS OF CARBONATED BEVERAGES

WASHINGTON, D. C. NOS. 23 AND 24

The glass-paneled Field Laboratory on display here is the motorized unit of the American Bottlers of Carbonated Beverages, national association of the soft drink industry. Pioneer in its field, the unit carries sufficient chemical, bacteriological, and engineering apparatus to make specialized investigations and quality control tests on carbonated beverages in bottling plants throughout the United States. The Field Laboratory, in bringing its unique individual service to the bottlers, operates as an adjunct to the permanent laboratory of the association located in Washington, D. C.

AMERICAN CAN COMPANY

NEW YORK, N. Y. NOS. 59 AND 60

Convention delegates are cordially invited to visit Booths 59 and 60 where information is available concerning those aspects of commercially canned foods which are of particular interest to members of the American Public Health Association. The American Can Company's modern, single-service, paper milk container will also be featured.

THE BEST FOODS, INC.

NEW YORK, N. Y. NO. 65

Booth 65 dramatizes the manufacture of Nucoa, the Modern Vegetable Margarine. The display features the elaborate testing carried on to maintain the uniform quality of Nucoa and its consistent Vitamin A potency of 9,000 USP units per pound. Highlighted also are the fine flavor and texture of Nucoa and the increasingly important place of fortified margarine in the national nutrition program.

THE BORDEN COMPANY

NEW YORK, N. Y. NO. 3

The Borden Company will exhibit an attractive display of milk products. Convention delegates are invited to visit Booth 3 for nutrition material planned for practical use in both home and office.

CAMEL CIGARETTES—MEDICAL RELATIONS DIVISION

NEW YORK, N. Y. NOS. 34 AND 35

CAMEL Cigarettes will exhibit large detailed photographs of equipment used in comparative tests of the five largest selling brands of cigarettes. These tests proved that CAMELS burn slower and contain less nicotine in the smoke than other cigarettes. Representatives will be available to discuss this research.

CARNATION COMPANY

OCONOMOWOC, WIS. NOS. 45 AND 46

In the Carnation Company exhibit in Booths 45 and 46 you will see a complete and dramatic presentation of the story of Irradiated Carnation Milk. Every operation in the processing—from farm to finished product—is performed in miniature before your eyes. You will enjoy this personally conducted tour through a Carnation evaporating plant.

CHURCH & DWIGHT CO., INC.

NEW YORK, N. Y. NO. 47

Twenty-five years before the first meeting of The American Public Health Association, Church and Dwight Company pioneered in first producing Bicarbonate of Soda in the Western Hemisphere. For nearly a century, this company has endeavored to improve its product and make it available at low cost. Today, Arm & Hammer Bicarbonate of Soda, known generally as Baking Soda, can be found in nearly every household. The low cost, purity and availability of Arm & Hammer, and the fact it is approved as a dentifrice by the American Dental Association Council, are reasons so many Health Officers recommend it in their Dental Health Educational work.

CLAY-ADAMS COMPANY, INC.

NEW YORK, N. Y. NO. 10

The Clay-Adams Company exhibit comprises three types of equipment.

LABORATORY INSTRUMENTS AND SUPPLIES including the new cardboard slide mailers, centrifuges, blood and other counters, Gold Seal slides and cover glasses, agglutination slides, slide boxes and specialties for microscopy.

EDUCATIONAL including anatomical charts and models, skeletons, Ayers and other obstetrical manikins, Chase Hospital Dolls.

MEDICAL AND SURGICAL SPECIALTIES including Cacoprene (synthetic rubber) catheters, drains, tubes, utility forceps, and Justrite Elastic Dressing.

THE COCA-COLA COMPANY

ATLANTA, GA. NO. 37

If sugar rationing and other considerations permit, we plan to distribute Coca-Cola with our compliments to those attending the meeting.

THE CREAM OF WHEAT CORPORATION

MINNEAPOLIS, MINN. NO. 53

THE CREAM OF WHEAT CORPORATION, Minneapolis, Minnesota (Booth 53), will exhibit Enriched 5-Minute "CREAM OF WHEAT." This improved cereal is completely cooked in five minutes and has been fortified with additional Vitamin B_1 (Wheat Germ and Thiamin), iron, calcium, and phosphorus.

R. B. DAVIS SALES CO.

HOBOKEN, N. J. No. 43

You are cordially invited to enjoy a drink of delicious Cocomalt at Booth 43.

Cocomalt is a milk-fortifier, designed to be mixed with milk and served hot or cold. The food value and palatability of milk are considerably increased by the addition of this vitamin and mineral enriched food. Cocomalt is fortified with vitamins A, B_1 and D and minerals calcium, phosphorus and iron. Ask our representatives for reprints on our medical studies.

THE DICK X-RAY CO.

ST. LOUIS, MO. No. 4

We contemplate exhibiting at this meeting the Westinghouse Photo-Fluorographic x-ray unit, together with the Portable Dynex X-ray Generator. We will also show several types of Viewing equipment for this 35 mm. Photo-Fluorographic film. This unit is ideal for survey work in connection with the Public Health Service and many of the institutions and associations are using it for that purpose. Our representatives at the booth will explain this unit thoroughly to anyone who desires further information without any obligation on his part.

DIFCO LABORATORIES INCORPORATED

DETROIT, MICH. No. 18

Exhibit of dehydrated culture media prepared according to the formulae of the American Public Health Association's "Standard Methods of Water Analysis" and "Standard Methods for the Examination of Dairy Products," as well as other media of particular interest in public health bacteriology.

Demonstration of Bacto-SS Agar, Bacto-MacConkey Agar and other media for isolation and identification of members of the typhoid-paratyphoid-dysentery group.

THE DIVERSEY CORPORATION

CHICAGO, ILL. No. 72

An educational display of real interest to all in attendance will be shown by The Diversey Corporation, Chicago, Ill. The principal section of the display consists of a three-panelled walnut background on which are mounted photographs and descriptive material showing the part played by Diversey Products and Diversey Service in maintaining public health standards. Every phase of modern cleaning and sterilization will be illustrated. The exhibit will be in charge of Mr. Lewis Shere, Vice-President.

EVAPORATED MILK ASSOCIATION

CHICAGO, ILL. No. 77

Of special interest to public health workers is the educational material of the Evaporated Milk Association. These publications are designed for use by public health departments in their nutrition programs, for maternal welfare centers, well-baby clinics and social service activities. Special materials are available on low-cost family feeding, prenatal, infant and preschool child feeding, school lunches, and quantity food preparation. New material prepared in cooperation with the National Nutrition Program will be on display at our booth.

THE J. B. FORD SALES CO.

WYANDOTTE, MICH. No. 36

A complete line of Wyandotte Products for food and beverage plant sanitation will be on display.

Wyandotte Steri-Chlor, a chlorine powder, used in solution, for germicidal and deodorizing operations.

Wyandotte Dish and Glass Washing Compounds for hand and machine use in all kinds of water.

Wyandotte Detergent for washing painted surfaces, cleaning porcelain and floors.

Wyandotte Bottle Washing Materials for milk and beverage plants.

Cleaners for every requirement of the Dairy Industry—including smaller packages for dairy farmers.

Other Wyandotte Products for general cleaning in food manufacturing and canning plants, hospitals, schools, hotels, public buildings.

GERBER PRODUCTS COMPANY

FREMONT, MICH. No. 61

GERBER'S

The Gerber booklets for mothers and the professional filing cards showing nutritive values of average servings, will be available at booth 61. You will be interested in examining the complete line of Gerber Foods.

THE GILLILAND LABORATORIES, INC.

MARIETTA, PA. No. 12

The Gilliland Laboratories will have on display at Booth 12 a complete line of Biological Products. This firm gives special attention to supplying Biological Products to State, City, and County Boards of Health, Hospitals and Institutions. The representative in charge of this exhibit will be pleased to answer any inquiries.

GRADWOHL SCHOOL OF LABORATORY TECHNIQUE

ST. LOUIS, MO. No. 2

This exhibit will show first a twenty-minute method of diagnosis of primary lesions of syphilis by frozen section and staining technique, thus obtaining a much higher percentage of accurate positives than the dark-field method; second, new facts on blood groups with demonstration of the Rh factor—an explanation of transfusion reactions, stillbirths, and miscarriages, and Erythroblastosis fetalis; and, third, motion picture of methods of teaching laboratory technique.

HYGEIA, THE HEALTH MAGAZINE

CHICAGO, ILL. No. 51

The HYGEIA Exhibit will consist of a three panel display featuring a Blow-up of a HYGEIA cover design showing a baby in a bathtub. The other two panels contain editorial matter on HYGEIA. The whole material may be set up on a table 8 feet in length. A table at the front of the booth for issuing of sample copies and other material is used. The three panel display is lighted.

KELLOGG COMPANY

BATTLE CREEK, MICH. No. 73

Kellogg's ready-to-eat cereals play a vital part in good nutrition. They supply whole grain (natural or restored) values, as recommended by the United States nutrition food rules. Whole grain products or enriched white bread and flour or cereal products restored to their original whole grain nutritive value should be eaten daily.

Recent nutrition information is available at the Kellogg Booth. Also, ask for your set of medical reprints covering recent research with bran.

KIMBLE GLASS COMPANY

VINELAND, N. J. No. 13

Kimble Blue Line Exax and Normax Precision Retested graduated ware and Kimble K Brand laboratory glassware and apparatus.

New. Brewer culture dish cover, an ingenious but simple device for easy cultivation of anaerobes without expensive equipment.

Especially featured. Bottles and other glass parts for preparation and injection of parenterals, particularly *blood plasma.* These are highly resistant to chemical attack, offering maximum assurance of unimpaired quality and clinical safety.

All material obtainable from laboratory supply houses.

LEDERLE LABORATORIES, INC.

NEW YORK, N. Y. NOS. 74, 75 AND 76

Sulfadiazine, the preferable sulfonamide of choice in pneumococcal infections, will be the focal point in Lederle's exhibit. This product was developed by its Sulfonamide Research Division of Lederle Laboratories. Animated charts dramatize the speed of recovery under the Sulfadiazine therapy in pneumonia and illustrate other points of advantages, *i.e.*, low toxicity, infrequent nausea, etc. IMMUNIZATION is also illustrated, featuring Lederle's Pertussis Antigen; Smallpox Vaccine; Diphtheria Antitoxin; Tetanus Antitoxin; Scarlet Fever Streptococcus Immunizing Toxin. Another section is devoted to Tuberculin Patch Test (Vollmer). Representatives of Lederle's staff will be in attendance.

LILY-TULIP CUP CORPORATION

NEW YORK, N. Y., AND LOS ANGELES, CALIF. NOS. 54 AND 55

Again this exhibit will feature information on the part that Lily-Tulip Cups and Containers play in the War program emphasizing the importance of the utmost in sanitation for industrial workers, school children, public use in restaurants, taverns, road stands, bars, military establishments, etc.

How Lily-Tulip Cups lower the incidence of disease in mass feeding.

J. B. LIPPINCOTT COMPANY

PHILADELPHIA, PA. No. 16

Of particular interest at the Lippincott exhibit are Zabriskie's "Mother and Baby Care in Pictures" and Hess and Lundeen's "The Premature Infant." Manzer's new book "Practical Sociology and Social Problems" will also be displayed. Meek's "Your Child's Development and Guidance Told in Pictures," Pillsbury's "Nursing Care of Communicable Diseases," Hasenjaeger's "Asepsis in Communicable Disease Nursing," and Ensworth and Greenwood's "Pneumonia and Its Nursing Care" are also important to Public Health Workers.

THE MACMILLAN COMPANY

NEW YORK, N. Y. No. 25

Of special interest to Public Health Workers, at the MACMILLAN Booth 25, will be the new book on RABIES, by Dr. Webster—"the most significant contribution to the study of rabies since the beginning of the century." Field workers and administrators alike look to COMMUNICABLE DISEASE CONTROL, by Anderson-Arnstein, and PUBLIC HEALTH ADMINISTRATION IN THE UNITED STATES, by Dr. Smillie, for answers on public health questions. Among other books will be the popular SO BUILD WE, by Mary S. Gardner, and THE PUBLIC HEALTH NURSE IN ACTION, by Marguerite Wales.

MERCK & CO., INC.

RAHWAY, N. J. No. 42

Chemotherapeutic agents of importance to members of the American Public Health Association will be on display at the Merck exhibit. Among these are: Vitamins—for the prevention and correction of nutritional deficiencies; Arsphenamines—for the treatment of syphilis; Sulfonamides—for the treatment of gonococcal, pneumococcal, and other specific infections; Zinc Peroxide Special Medicinal—for the treatment of anaerobic wound infections; and Vinethene—for short anesthesias. Literature on these and other Merck products will be available at the Merck booth.

MINE SAFETY APPLIANCES COMPANY

PITTSBURGH, PA. No. 14

The M.S.A. booth will feature a complete line of personal and plant protective equipment: Gas-detecting and indicating instruments to include Carbon Monoxide Detector, Carbon Monoxide Indicator, Carbon Monoxide Alarm, Benzol Indicator, Model 1 and Model 2 Explosimeters, Explosionproof Combustible Gas Alarm, and dust sampling and counting instruments consisting of Midget Impinger, Electrostatic Dust and Fume Sampler, and Dust Counting Microscope. Dust and Mist Respirators, Cartridge Respirators, Gas Masks, Oxygen Breathing Apprartus, H-H Inhalator, Skullgard Protective Hats, First Aid Kits and Materials, Goggles, and Ear Defenders will be among the products displayed.

Both office and field representatives will be in attendance to demonstrate and discuss the equipment.

THE C. V. MOSBY COMPANY, MEDICAL AND DENTAL PUBLISHERS

ST. LOUIS, MO. No. 48

Public health workers attending the 71st Annual Meeting in St. Louis will find that time spent at the Mosby Booth 48, is time well spent. Among the books you're sure to find interesting are Top "Handbook of Communicable Diseases," Lynch "Communicable Disease Nursing," the new 6th edition Turner "Personal and Community Health," Turner-McHose "Effective Living," and Cameron "Bacteriology of Public Health." Whether you have a special book in mind or are "just looking" you're welcome at the Mosby Booth 48.

NATIONAL DAIRY COUNCIL

CHICAGO, ILL. No. 50

"Food for Victory" is the National Dairy Council animated, lighted exhibit. It presents the basic pattern for adequate daily meals as recommended by nutrition authorities. This exhibit bears the Seal of Acceptance of the Council on Foods and Nutrition, American Medical Association.

A life-size model of a homemaker points to the lighted, colored photographs of foods in the pattern. The side panel emphasizes the theme of nutrition and national Health: "Victory demands healthy Americans."

NATIONAL LIVE STOCK AND MEAT BOARD

CHICAGO, ILL. No. 11

The exhibit of the National Live Stock and Meat Board will portray the rôle of meat as a source of protein, calories, minerals, and vitamins in the adequate diet. Literature showing the food value of meat and the place of meat in the National Nutrition Program will be available.

NURSE PLACEMENT SERVICE, INC.

CHICAGO, ILL. No. 26

Anna L. Tittman, R.N., Executive Director, will be on duty throughout the meeting at Booth 26, which is set up as a temporary office with facilities for private interviews with employers of nurses and technicians (laboratory, x-ray, physiotherapy. etc.) and with nurses who desire guidance or placement in any of the fields of nursing except private duty.

OVAL WOOD DISH CORPORATION

TUPPER LAKE, N. Y. No. 49

The Oval Wood Dish Corporation will display in Booth 49, its complete line of Ritespoons and Riteforks—sanitary single service eating utensils. These sanitary single service utensils are made of pure, natural, White Birch wood, have the true shape of table silver, and are manufactured under strict sanitary control. They constitute the only real substitute for metalware in the mass feeding of defense workers in industrial plants throughout the United States, in Army Post Exchanges, Navy Yards, Shipyards, etc. Members of the A.P.H.A. are cordially invited to register for samples and literature.

PARKE, DAVIS & COMPANY

DETROIT, MICH. No. 39

A new type of Antitoxin is featured in the colorful display of Parke, Davis and Co. in Booth 39. Other outstanding contributions in the pharmaceutical and biological fields having particular interest in war time are also displayed.

Among the featured biological products are preparations for diagnosis, prophylaxis, immunization, and treatment.

You are cordially invited to visit this exhibit where you will find several members of Parke, Davis and Company's technical staff who will be pleased to explain the meritorious features of these and other products.

PET MILK SALES CORPORATION

ST. LOUIS, MO. NOS. 19, 20, 21 AND 22

An actual working model of a milk condensing plant in miniature will be exhibited by the Pet Milk Company in Booths 19, 20, 21, and 22. This exhibit offers an opportunity to obtain information about the production of Irradiated Pet Milk and its uses in infant feeding and general dietary practice. Miniature Pet Milk cans will be given to each physician who visits the Pet Milk Booth.

PETROLAGAR LABORATORIES INC.

CHICAGO, ILL. No. 64

You are cordially invited to visit the Petrolagar exhibit where a new and enlightening story on Petrolagar, an aqueous suspension of mineral oil, will be related. Beautifully colored anatomical drawings and new literature may be had upon request from our professional representatives who will be in constant attendance.

POWERS X-RAY SERVICE

GLEN COVE, N. Y. No. 52

POWERS X-RAY SERVICE shows the rapid x-ray method and apparatus used by them for x-raying large groups of persons under the supervision of the medical profession. A demonstration of the comparative diagnostic clarity of the paper film and transparent base film is shown; also a typical roll of a hundred radiographs produced by this service.

All necessary equipment for making and processing the full size 14 x 17 inch radiographs is furnished as a part of the service, thus obviating any investment in chest apparatus for survey purposes.

PROCTER & GAMBLE—IVORY SOAP

CINCINNATI, OHIO No. 38

SIXTY-TWO YEARS' EXPERIENCE IN MAKING MILD SOAP

What is soap's effect on the skin?

What makes a soap "mild"?

What are the new and accepted techniques for Testing Soap? With the appearance today of new studies of the functions of soap—in the field of public health and medicine—we believe the Ivory Soap exhibit will hold more than casual interest for professional public health workers. We cordially invite you to visit Booth 38 where a qualified member of Procter & Gamble's scientific staff will be glad to answer questions.

PHILIP MORRIS & CO., LTD., INC.

NEW YORK, N. Y. No. 44

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

RALSTON PURINA COMPANY

ST. LOUIS, MO. No. 15

Nutrition for National Defense being our theme, we will exhibit our famous whole grain cereal products; Ralston Hot Whole Wheat Cereal; Instant Ralston Hot Whole Wheat Cereal; Shredded Ralston, Bite Size Shredded Whole Wheat Cereal; Ry-Krisp, Whole Rye Wafer.

Our miniature cereal mill will demonstrate how a whole grain cereal is made. Research literature on nutrition and samples of various products will be distributed.

W. B. SAUNDERS COMPANY

PHILADELPHIA, PA. No. 9

The W. B. Saunders Company welcomes you to its exhibition, at Booth 9, of its complete line of books on Medicine, Nursing, and Health. Among these will be Bauer and Hull's Health Education, new edition; Bolduan's Public Health and Hygiene; Boyd's Preventive Medicine; Geiger's Health Officers' Manual; Conrad and Meister's Teaching Procedures in Health Education; Grant's new Nursing: A Community Health Service; Stokes' Clinical Syphilolgy; Stokes' Dermatology and Syphilology; Pelouze's Gonorrhea; and the new Duncan's Diseases of Metabolism.

SEALRIGHT COMPANY, INC.

NEW YORK, N. Y. NOS. 56, 57 AND 58

SEALTEST, INC.

NEW YORK, N. Y. NOS. 68 AND 69

The exhibit of the Sealtest System of Laboratory Protection explains the work of this organization in dairy products research and in production control of ice cream, milk and other dairy products. The activities of the Sealtest Laboratory Kitchen will also be featured. This is the Consumer Service division of the Sealtest System, promotng the use of dairy products in the home, with special emphasis on the nutritive value of these products.

SHARP & DOHME

PHILADELPHIA, PA. NOS. 40 AND 41

Sharp & Dohme will have a striking display featuring the Roper National Immunization Survey, products used for active immunization against diphtheria, whooping cough, typhoid fever, smallpox, tetanus, and scarlet fever, together with other biological and pharmaceutical products of interest to the Public Health physician. Another striking feature will be the display on "Lyovac" Normal Human Plasma. Capable, well-informed representatives will be on hand to welcome all visitors and furnish information on Sharp & Dohme products.

E. R. SQUIBB & SONS

NEW YORK, N. Y. NOS. 62 AND 63

The Squibb Exhibit, located in Booths 62 and 63, will utilize striking visual methods to convey pertinent information about a selected list of products of particular interest to workers in the field of Public Health. We hope that all visitors attending the American Public Health Association Convention will stop in at the Squibb Exhibit. Well informed representatives will be on hand to welcome visitors and to furnish detailed information on the products displayed.

THE STANDARD REGISTER COMPANY

DAYTON, OHIO NO. 71

UNITED FRUIT COMPANY

NEW YORK, N. Y. NO. 70

At the United Fruit Company Booth 70, you will find an interesting display of the timely dishes which can be made with bananas and which can fit into the many phases of the present Public Health Program.

We will be pleased to have you register with us.

WALLACE & TIERNAN CO., INC.

NEWARK, N. J. NOS. 66 AND 67

The exhibit of Wallace & Tiernan Co., Inc. at the A.P.H.A. St. Louis meeting in October will feature emergency chlorination and include the W&T chlorination trailer, portable chlorinator and hypochlorinator. Photographs showing the havoc wrought in England on underground water mains as a result of bombing will be a part of our exhibit. A member of the W&T staff, thoroughly familiar with the priorities situation, will be on hand to answer questions in that connection.

Places of Scientific Interest in the Convention City

THE St. Louis Health Division is happy to invite the delegates of the American Public Health Association to visit the many places of scientific interest in St. Louis. Despite the fact that transportation facilities will not be available as in former years, for obvious reasons, an attempt will be made by the Arrangement Committee to carry out the wishes of the delegates regarding tours to certain places that they may be interested in. A brief description of the main places of scientific interest follows:

THE ST. LOUIS WATER WORKS

The construction of water works for the City of St. Louis was begun in 1829 by private parties under an exclusive franchise granted by the city. The city acquired ownership in 1835 and since that time the works have been in the process of improvement and enlargement almost continuously.

The location of the Intakes and Pumping Stations was changed in 1871 and again in 1892. In 1929, one hundred years after the first Water Works was started, a new plant was put in operation on the Missouri River at Howard Bend. At the Chain of Rocks the supply is pumped from the Mississippi River into six sedimentation basins having a capacity of about 200,000,000 gallons, where partial softening is effected by lime, and sedimentation is hastened by coagulation with sulfate of iron. Secondary coagulation and sedimentation in two additional basins are followed by filtration and sterilization with ammonium sulfate and chlorine. The rapid sand filters have a capacity of 160,000,000 gallons in 24 hours. The finished water flows by gravity through conduits to the High Service Pumping Stations located 3½ miles and 7 miles from the Chain of Rocks.

The Howard Bend Plant is located on the Missouri River at Howard Bend, about 16 miles from the city limits, and was built to augment the supply from the Chain of Rocks Plant. The same purification methods are followed as at the Chain of Rocks plant except that the supply passes through four basins for pre-sedimentation before the lime and iron sulfate are added and carbon dioxide can be added before filtration. The rapid sand filters have a capacity for 80,000,000 gallons per 24 hours. According to the latest annual report the total consumption for the fiscal year ending April, 1941, was 45,987,919,180 gallons and the average daily consumption was 125,994,299 gallons. A trip to the Water Works is scheduled.

THE DAIRIES

St. Louis is fortunate in having a Standard Milk Ordinance which was adopted in December, 1936, with grading and degrading provisions and has over 90 per cent compliance. St. Louis is unique among the larger cities in the country since it has no raw milk. A trip to one of the larger dairies is planned. Arrangements will also be made for those desiring to visit farms supplying milk.

THE UNIVERSITIES

St. Louis has two class A universities, namely, St. Louis University and Washington University. In both of these institutions visitors can obtain helpful information, for instance, Washington University has a Museum with a wonderful collection of rare specimens of bone pathology. St. Louis University is especially noted for the discovery of Theelin and vitamin K.

THE HOSPITALS

The City Hospital was founded in 1853 and now has a capacity of 1,104. It is estimated that from 90 to 95 per cent of the city's emergency cases are taken to the City Hospital. Recently new buildings were added, and the Bliss Hospital for the observation and treatment of psychiatric cases is one of the finest in the country. The new x-ray department and the City Hospital laboratories are worth seeing.

The Robert Koch Hospital is the city's institution for the treatment of tuberculosis. This institution was built primarily for the treatment of yellow fever, and later smallpox and leprosy cases were housed there. In 1910 it was converted into a tuberculosis sanatorium, and since 1922 new buildings were erected so that at the present time it is one of the most modern institutions in the country. It is one of the few tuberculosis institutions in the country that has no wards. It has a capacity of 688. Those interested in the construction of sanatoria or in tuberculosis generally cannot afford to miss the opportunity of visiting this institution.

The City Sanitarium and the St. Louis Training School are municipal institutions for the treatment of the insane and the feebleminded children respectively.

Homer G. Phillips Hospital is the municipal hospital for Negroes. It has a capacity of 685 beds. It was constructed in recent years and is one of the largest Negro hospitals in the country. It is administered by an all Negro staff. The consulting medical staff is made up of white physicians from both universities, alternating their services.

PRIVATE HOSPITALS

The private hospitals worthy of visiting are the Barnes Hospital, Children's Hospital, and others affiliated with the Washington University Medical School. The St. Louis University group of hospitals, comprising St. Mary's Hospital, Mt. St. Rose for the treatment of tuberculosis, and the Desloge Hospital which is the main teaching hospital of St. Louis University are also well worth visiting.

Those interested in the treatment of crippled children will find that the Shriner's Hospital for Crippled Children is worth going to.

The Barnard Skin and Cancer Hospital will attempt to answer questions relating to the treatment and to the research phases of cancer, since considerable research work is constantly going on in this institution.

OTHER PLACES OF INTEREST

School physicians and others may find it profitable to visit the Central Institute for the Deaf which is one of the finest schools of this kind in the country.

Of interest to many public health workers, and especially to those interested in public health education, will be a visit to the Library of Education, which is a part of the St. Louis public school system. This library consists of sound and colored movies on educational subjects. This library is situated at 4466 Olive Street, and arrangements for visits will be made on request.

Engineers and laboratory workers may find it profitable to visit the Anheuser-Busch Brewery which is the world's largest brewery. The officers of the brewery cordially invite the members of the American Public Health Association to visit the plant at Broadway and Pestalozzi. Since the plant consists of 110 buildings covering 70 city blocks, the regular visitor's guided tour can cover only a few of the major points of interest.

Although beer is the main product of Anheuser-Busch, Inc., many other products of vital importance in the war are also produced. A few of these are—

starches, dextrins, corn syrups, malt syrups, table syrups, pharmaceutical yeast and yeast products or derivatives, cattle feeds, and baker's yeast. Special trips through the laboratories may be arranged for a limited number of interested individuals and the regular tour will be open to all.

ATTRACTIONS IN THE ST. LOUIS HEALTH DIVISION

The St. Louis Health Division, which is just across the street from the Convention Hall in the Municipal Courts Building, provides many points of interest and the delegates are cordially invited to visit all sections of the Division.

The Venereal Disease Clinic—situated in the Municipal Courts Building. Those interested in the control of venereal diseases will find it profitable to pay a visit to the Venereal Disease Clinic and see how the new *Venereal Disease Ordinance,* which is probably the only one of its kind in the country, is operated. It is purely a diagnostic clinic. The treatments are given by six coöperating hospitals and clinics to whom the patients are referred and for whom the Health Division pays 50 cents per treatment.

The St. Louis Health Division Bacteriological and Chemical Laboratories are well worth visiting. It is one of the public health laboratories applying gonorrhea culture methods routinely and one of the few that has a virus laboratory. It is one of two municipal public health laboratories that exercise constant check and control over the local private laboratories in the diagnosis of venereal diseases.

A visit to the Health Division Dental Extraction Clinic in the Municipal Courts Building may be of interest to the visiting dentists. In this clinic each child receives a medical examination of the heart and lungs before anesthesia is administered.

The Pasteur Clinic is of interest. Here methods of handling and treating those bitten by suspected rabid dogs will be seen.

Visits to the Health Division Immunization Clinic which operates 8 hours daily, the St. Louis Municipal Public Health Nursing, and to the Industrial Hygiene Section will prove profitable.

Health Centers: St. Louis has ten Health Centers located in the poorer sections of the city. In each Health Center the preventive work is carried out in maternal hygiene, child hygiene, tuberculosis control, and dental hygiene. Nurses will be particularly interested in the family folder system which has recently been instituted in these Health Centers.

A visit to the Out-Patient Pneumothorax Clinic may be of interest to those in the control of tuberculosis.

OTHER POINTS OF INTEREST

There are many other things worth seeing in and around St. Louis by the visiting members of the American Public Health Association, such as the St. Louis Medical Society's Library, which contains an exhibit of unusual medical historical documents; also, of interest is a visit to the grave of Dr. William Beaumont who contributed so much to gastric physiology, and who is buried in Bellefontaine Cemetery.

Trips to other places which some of the delegates might wish to visit will be arranged by the Local Committee upon request. A list of such places is given here:

1. Bellefontaine Farm, which is the home for delinquent boys
2. Ridge Farm County Department for convalescent children
3. Marine Hospital
4. United States Veterans Hospital
5. St. Louis Isolation Hospital
6. Division of Hygiene Board of Education
7. St. Louis Tuberculosis Society, especially the Residential Night and Day Camp
8. Missouri School for the Blind
9. Psychiatric Clinic

10. School of Public Health Nursing, St. Louis University
11. Junior League Occupational Work Shop

It should be remembered, especially by those interested in industrial hygiene, that our larger plants are not open for inspection on account of the war.

In conclusion, it should be stated that every employee of the St. Louis Health Division will do everything possible to carry out the wishes of the delegates regarding trips to any place in and around St. Louis, if transportation facilities permit.

OFFICERS AND EXECUTIVE COMMITTEE ST. LOUIS ANNUAL MEETING

Dr. Joseph F. Bredeck, Chairman of the Local Committee, for the Seventy-first Annual Meeting of the Association in St. Louis, Mo., October 27–30, announces the following Committee appointments:

Finance Committee
B. M. Lide, Jr., *Chairman*

Reception Committee
J. J. Bronfenbrenner, Ph.D., *Chairman*
E. G. McGavran, M.D., *Vice-Chairman*

Meeting Rooms
Percy M. Gash, *Chairman*
Melvin Tess, M.D., *Vice-Chairman*

Registration
F. H. Rein, *Chairman*
Dr. J. Earl Smith, *Vice-Chairman*

Scientific Trips
J. C. Willett, D.V.M., *Chairman*
Mildred Sanderson, *Vice-Chairman*

Entertainment Committee
Stephen Wolff, *Chairman*
Mrs. Virgil Loeb, *Vice-Chairman*

Ladies' Entertainment and Transportation
Mrs. Martin J. Glaser, *Chairman*
Mrs. Joseph C. Peden, *Vice-Chairman*

Attendance
Robert C. Farrier, M.D., *Chairman*
John Buxell, *Vice-Chairman*

Publicity
H. I. Spector, M.D., *Chairman*
Mrs. Schuyler M. Smith, *Vice-Chairman*

A.P.H.A. SUSTAINING MEMBERS, 1942

IT is now twenty-five years since Sustaining Members have been a part of the membership in this professional society. Their contributions this year, when measured in dollars, amount to 12 per cent of the income from dues. When measured in significance, however, they mean an even more substantial share in Association activity, for without such help it would be impossible to publish such reference works as the Standard Methods series in Water, in Dairy Products, in Diagnostic Procedures and Reagents, or such reports as that on the Control of Communicable Diseases, a report which in circulation perhaps exceeds any other regularly used by the professions.

In expressing again the appreciation which the Association feels toward these fourteen members, the Executive Secretary has said to them that the past year turned out to be an even more dynamic year for the public health profession than we had guessed. The need for an excellent quality of professional health work moved into the center of public attention, and the demands for people and Association services exceeded all previous records.

The reports from Honolulu and Alaska now tell us how the health departments and their related agencies moved in to protect both civil and military populations in the emergency. From the other side of the water comes

the testimony of the Right Honorable Malcolm Macdonald, formerly British Minister of Health, who emphasized before the Tolan Committee of Congress the critical importance of health services in building morale. The need for this professional society of public health workers was never more apparent.

Sustaining Members of the A.P.H.A., 1942

Life Insurance Group

	Year Elected
The Equitable Life Assurance Society New York, N. Y.	1918
The John Hancock Mutual Life Insurance Company Boston, Mass.	1924
The Life Insurance Company of Virginia Richmond, Va.	1925
The Metropolitan Life Insurance Company New York, N. Y.	1918
The National Life Insurance Company Montpelier, Vt.	1918
The Prudential Insurance Company of America Newark, N. J.	1917
The Sun Life Insurance Company of America Baltimore, Md.	1925
The Traveler's Insurance Company Hartford, Conn.	1933
The Union Central Life Insurance Company Cincinnati, Ohio	1918
The Western & Southern Life Insurance Company Cincinnati, Ohio	1919

Other Individuals and Organizations

	Year Elected
The Chlorine Institute, Inc. New York, N. Y.	1928
Mrs. Moses H. Cone Baltimore, Md.	1920
The Gilliland Laboratories, Inc. Marietta, Pa.	1924
The International Association of Ice Cream Manufacturers Washington, D. C.	1928

NOMINATIONS FOR THE GOVERNING COUNCIL

IN accordance with the By-Laws of the Association, the Nominating Committee for Governing Council members, consisting of one Fellow from each Section, reports the following nominations for the Governing Council. The By-Laws provide that "upon the petition of twenty-five Fellows, the Nominating Committee shall add the name of any Fellow to this list, provided such petition is received fifteen days before the Annual Meeting." The Chairman of the Committee is Friend Lee Mickle, Sc.D., Director of Laboratories, State Department of Health, Hartford, Conn. The other members are: Herman G. Baity, Sc.D., Engineering Section; J. V. DePorte, Ph.D., Vital Statistics Section; Albert S. Gray, M.D., Industrial Hygiene Section; Ruth E. Grout, Ph.D., Public Health Education Section; Wilton L. Halverson, M.D., Health Officers Section; Albert C. Hunter, Ph.D., Food and Nutrition Section; Kenneth F. Maxcy, M.D., Epidemiology Section; Marian G. Randall, R.N., Public Health Nursing Section; William D. Stovall, M.D., Laboratory Section; Estella F. Warner, M.D., Maternal and Child Health Section.

There are thirty elective councillors on the Governing Council of whom ten are elected each year. The ten Fellows receiving the highest number of votes on a written ballot cast by the Fellows present and voting at the Annual Meeting in St. Louis will be elected for the three year term 1942–1945.

Gaylord W. Anderson, M.D.
University of Minnesota
Minneapolis, Minn.

Margaret G. Arnstein, R.N.
State Department of Health
New York, N. Y.

E. L. Bishop, M.D.
Director of Health, T.V.A.
Chattanooga, Tenn.

Walter H. Brown, M.D.
Stanford University
Palo Alto, Calif.

Selwyn D. Collins, Ph.D.
U. S. Public Health Service
Washington, D. C.

Michael M. Davis, Ph.D.
Committee on Research in Medical Economics
New York, N. Y.

R. D. Defries, M.D.
University of Toronto
Toronto, Ont.

C. Mayhew Derryberry, Ph.D.
U. S. Public Health Service
Washington, D. C.

V. M. Ehlers, C.E.
State Department of Health
Austin, Tex.

Donald G. Evans, M.D.
State Director of Health
Seattle, Wash.

F. W. Fabian, Ph.D.
Michigan State College
East Lansing, Mich.

Martin Frobisher, Jr., D.Sc.
Johns Hopkins School of Hygiene and Public Health
Baltimore, Md.

Jean Gregoire, M.D.
Deputy Minister of Health
Quebec, Que.

Selskar M. Gunn
National Health Council
New York, N. Y.

Prof. Charles G. Hyde
University of California
Berkeley, Calif.

Pearl L. Kendrick, Sc.D.
Department of Health Laboratories
Grand Rapids, Mich.

A. J. Lanza, M.D.
Metropolitan Life Insurance Company
New York, N. Y.

James P. Leake, M.D.
U. S. Public Health Service
Washington, D. C.

Joseph I. Linde, M.D.
Health Officer
New Haven, Conn.

Henry E. Meleney, M.D.
New York University
New York, N. Y.

Arthur P. Miller, C.E.
U. S. Public Health Service
New York, N. Y.

Helen S. Mitchell, Ph.D.
Federal Security Agency
Washington, D. C.

Ralph S. Muckenfuss, M.D.
Director, Bureau of Laboratories
New York, N. Y.

Alton S. Pope, M.D.
State Department of Public Health
Boston, Mass.

Warren J. Scott
State Department of Health
Hartford, Conn.

John J. Sippy, M.D.
San Joaquin Health District
Stockton, Calif.

F. W. Tanner, Ph.D.
University of Illinois
Urbana, Ill.

Katharine Tucker, R.N.
University of Pennsylvania
Philadelphia, Pa.

Huntington Williams, M.D.
Commissioner of Health
Baltimore, Md.

Robert E. Wodehouse, M.D.
Department of Pensions and National Health
Ottawa, Ont.

WANTED: The following issues of the *American Journal of Public Health*—July and August, 1941; and January, 1942. The Association will be glad to pay postage.

APPLICANTS FOR MEMBERSHIP

The following individuals have applied for membership in the Association. They have requested affiliation with the sections indicated.

Health Officers Section

Ray H. Ballard, M.D., 817 South 11th St., Laramie, Wyo., Director, Student Health Service, Univ. of Wyoming

Lt. Commdr. Arthur P. Black, M.C., U.S. N.R., U. S. Naval Air Station, Kingsville, Tex., Sanitation Officer

Albert L. Chapman, M.D., 255 Linden St., Moorestown, N. J., Dist. Health Officer

Hubert Flurry, M.D., 1724–24th Ave., Meridian, Miss., Trainee, Lauderdale County Health Dept.

William P. Frank, M.D., 2216 Winthrop Drive, Alhambra, Calif., Communicable Disease Physician, Los Angeles County Health Dept.

Philip J. Holabach, M.D., Whitman County Health Dept., Colfax, Wash., Health Officer

Raymond F. Kaiser, M.D., M.P.H., 786 30th Ave., San Francisco, Calif., Passed Asst. Surgeon, U. S. Public Health Service

Maurice Kamp, M.D., 217 E. Spring St., New Albany, Ind., P. A. Surgeon (R), U. S. Public Health Service

Romeo H. Lewis, M.D., M.P.H., 33 Warwick St., Boston, Mass., Student, Harvard School of Public Health

Paul A. Lindquist, M.D., M.S.P.H., 218 E. First St., Monroe, Mich., Director, Monroe County Health Dept.

Murphy P. Martin, M.D., P. O. Box 128, Thibodaux, La., Director, Lafourche Parish Health Unit

Abraham Oppenheim, M.D., Arcadia, La., Director, Bienville Parish Health Unit

John E. Petcoff, M.D., 2520 Monroe St., Plaza Apt., Toledo, Ohio, Acting Director, Public School Health Service, Board of Education

Wallace W. Schwabland, M.D., 317 County-City Bldg., Seattle, Wash., King County Health Officer

Kenneth C. Sheriff, M.D., Monterey County Hospital, Salinas, Calif., Monterey County Health Officer

Frank Ternocky, M.D., Bloomville, Ohio, Health Commissioner, Seneca County Dist.

Thomas McK. Thompson, M.D., M.P.H., 120 Front St., Philipsburg, Pa., Dist. Medical Officer, State Dept. of Health

Laboratory Section

Edward S. Biddle, M.S., 29 E. Park Place, Newark, Dela., Research Bacteriologist, Univ. of Delaware

William Burrows, Ph.D., Dept. of Bact., Univ. of Chicago, Chicago, Ill., Asst. Professor of Bacteriology

Carl A. Frey, Ph.D., 54 Shannon Ave., Athens, Ohio, Professor of Bacteriology, Ohio Univ.

Stanley J. Gilmore, 634 N.E. 60th Ave., Portland, Ore., City Bacteriologist, Bureau of Health

John W. Williams, M.D., 10–424 Massachusetts Institute of Technology, Cambridge, Mass., Associate Professor of Public Health Laboratory Methods

Vital Statistics Section

Huldah H. Ainsworth, Waterbury Hospital, Waterbury, Conn., Medical Records Librarian

Alberto E. Calvo-Sucre, M.P.H., P. O. Box 1158, Panama City, Republic of Panama, Chief, Division of Vital Statistics and Epidemiology

Engineering Section

Anthony L. Bavone, Box 1268, Minot, N. D., Sanitary Engineer, Minot-Ward Health Unit

Harold A. Kemp, 1721 N. Huntington St., Arlington, Va., Head Engineer, Office, Chief of Engineers, U. S. Army

Z. H. Legg, Fayetteville, W. Va., Sanitarian, Fayette County Health Dept.

Robert J. Ollry, M.S.P.H., 348 Beacon St., Boston, Mass., Instructor in Biology, St. Lawrence Univ., Canton, N. Y.

William Samborski, M.S.P.H., 3919 John R. St., Detroit, Mich., Senior Sanitary Engineering Aid, City Dept. of Health

Industrial Hygiene Section

Charles D. Bitting, 39 Hillside Ave., Kenvil, N. J., Safety Supervisor, Hercules Powder Co.

Food and Nutrition Section

Fred C. Baselt, 230 Park Ave., New York, N. Y., Manager of Research, Atlantic Division, American Can Co.

Philip R. Carter, D.V.M., 3736–47th Ave., South, Minneapolis, Minn., Veterinary Officer, Veterinary Corps, U. S. Army

Robena C. Carter, 700 South Beacon, Sedalia, Mo., Unit Supervisor, Housekeeping Aide Project, WPA

Maternal and Child Health Section

Powell C. Carrel, D.D.S., M.P.H., 123 Argyle Ave., West Hartford, Conn., Chief, Div. of Dental Hygiene, State Dept. of Health

William W. Kelton, Jr., M.D., 707 W. 7th St.,

Austin, Tex., Director, Maternal & Child Health, Austin-Travis-Bastrop Health Unit

Elsie F. Norman, 311 Brush Creek, Kansas City, Mo., Dist. Supervisor, Child Protection Program, Works Projects Admin.

E. Bliss Pugsley, M.D., 245 Cooper St., Council House, Ottawa, Canada, Executive Asst., Div. of Maternal & Child Hygiene, The Canadian Welfare Council

Elihu L. Schuman, D.D.S., 171 Eastern Parkway, Brooklyn, N. Y., Dental Officer, U. S. Veterans' Admin.

Jess B. Spielholz, M.D., 506 Ft. Washington Ave., New York, N. Y., Clinic Pediatrician, New York City Dept. of Health

Public Health Education

Herbert Bauer, M.D., General Hospital, San Luis Obispo, Calif., San Luis Obispo County Physician

Jane L. Lyman, 228 Edwards St., New Haven, Conn., Student, Yale Univ. School of Public Health

Phyllis K. McCalmont, M.A., 519 Smithfield St., Pittsburgh, Pa., Executive Secretary, Child Health Div., General Health Council of Allegheny County

Roy L. Reinarz, 5010 Duval St., Austin, Tex., Sanitary Reserve, State Dept. of Health

Claire E. B. Reinhardt, M.Ed., C.P.H., 1551 Franklin Ave., Mineola, L. I., N. Y., Director of Education, Nassau County Cancer Committee

Kyle C. Rigsby, 100 N. 6th Ave., East, Cullman, Ala., Asst. in Health Education, Div. of Statistics and Reports, U. S. Public Health Service

Public Health Nursing Section

Margaret D. Arbuckle, Grantsville, W. Va., Public Health Nurse, State Health Dept.

H. Eleanor Johnson, Box 216, Williamsburg, Va., Chief Nurse, Peninsula Health Dist.

Ada Kruger, R.N., Lincoln County Health Dept., Hamlin, W. Va., Public Health Nurse

Freda M. LaKamp, Farm Bureau Bldg., Waterloo, Ill., County Nurse, Monroe County Nursing Service

Leah E. Miller, Health Dept., Lumberton, N. C., Public Health Nurse, U. S. Public Health Service

Emily G. Murray, R.N., P. O. Box 1118, Lufkin, Tex., Nurse, Angelina County Child Welfare Board

Ethel C. Ryckman, R.N., 39 North St., Hillsdale, Mich., Senior Counsellor, Hillsdale County Health Dept.

Elizabeth J. Smith, 351 Eighth Ave., N., Twin Falls, Ida., School Nurse, South Central Dist. Health Unit

Epidemiology Section

Harry H. Henderson, M.D., State Health Dept., Richmond, Va., State Epidemiologist

Ira D. Hirschy, M.D., 524 Linden St., Ann Arbor, Mich., Student, Univ. of Michigan, School of Public Health

Edward Kupka, M.D., 703 California State Bldg., Los Angeles, Calif., Chief, Bureau of Tuberculosis, State Dept. of Public Health

Joseph Py, D.O., 460 Lyceum Ave., Philadelphia, Pa., Head, Dept. of Preventive Medicine and Bacteriology, Philadelphia College of Osteopathy

Unaffiliated

Jean G. Ferguson, 428 Yale Ave., New Haven, Conn., Student and Asst. in Public Health Dept., Yale Univ.

Emil A. Tiboni, Greyledge Farm, R.F.D. 1, Glastonbury, Conn., Sanitary Inspector, Dept. of Health, East Hartford, Conn.

DECEASED MEMBERS

John N. Eisman, M.D., Cincinnati, Ohio, Elected Member 1941, Epidemiology Section

Howard W. Hassell, M.D., Bridgeport, Pa., Elected Member 1939, Health Officers Section

Harold H. Keller, Philadelphia, Pa., Elected Member 1932, Industrial Hygiene Section

J. P. Russell, M.D., Berkeley, Calif., Elected Member 1938, Elected Fellow 1940, Industrial Hygiene Section

A. N. Talbot, Urbana, Ill., Elected Member 1913, Charter Fellow 1922, Engineering Section

James D. Trask, M.D., New Haven, Conn., Elected Member 1936, Epidemiology Section

William H. Best, M.D., Brooklyn, N. Y., Elected Member 1936, Elected Fellow 1939, Health Officers Section

L. T. Clark, D.Sc., Detroit, Mich., Elected Member 1919, Elected Fellow 1931, Laboratory Section

Walter S. Goodale, M.D., Buffalo, N. Y., Elected Member 1923, Epidemiology Section

Abraham Lichterman, Ph.D., Brooklyn, N. Y., Elected Member 1935, Elected Fellow 1938, Food and Nutrition Section

Max P. Schranck, M.D., Twin Falls, Ida., Elected Member 1940, Industrial Hygiene Section

Winfield Carey Sweet, M.D., Dr.P.H., Lashie, Burma, India, Elected Member 1924, Epidemiology Section

EMPLOYMENT SERVICE

The Association Employment Service seeks to bring to the attention of appointing officers the names of qualified public health personnel and to act as a clearinghouse on employment. This is a service of the Association conducted without expense to the employer or employee.

From the registry of persons available, selected announcements are published from time to time. Appointing officers may obtain lists of all registrants on request.

Address all correspondence to the Employment Service, American Public Health Association, 1790 Broadway, New York, N. Y.

U. S. CIVIL SERVICE COMMISSION

The Commission has announced unassembled examinations for Junior Public Health Nurse at $1,800 a year and Junior Graduate Nurses at $1,620 a year, under which the training and age requirements of announcements No. 88 and 103 of 1941 have been amended. Persons interested should communicate with the U. S. Civil Service Commission in Washington or obtain the amended announcements at any first or second class post office.

The Commission has announced again its need for public health nursing consultants in war work. The new announcement now provides for 5 grades and for appointments in the Children's Bureau, Department of Labor, U. S. Public Health Service, and Federal Security Agency. Salaries range from $2,600 to 5,600 a year. No age limits have been set. Positions exist both in the United States and foreign countries. War service appointments will be made to extend generally for the duration of the war and no longer than 6 months afterward. Duties are to carry out, in accordance with the rank of the position, nursing or nursing education programs; and to act in advisory capacity to Federal agencies, or to State, County, and municipal organizations.

There will be no written test, qualifications being judged solely from review of experience, education, and training of applicants. Persons applying must have completed a 4 year course in a recognized college and 1 year's special program of study in public health nursing approved by the National Organization for Public Health Nursing; must also have graduated from an accredited school of nursing affiliated with a hospital having a daily average of 100 or more bed patients; be registered nurses in a state or territory of the United States or the District of Columbia, and have had appropriate general public health nursing supervisory experience. Additional credit given for completion of approved college course in statistical analysis, public health nursing, supervision, social hygiene, tuberculosis control and maternity, pediatric or orthopedic nursing; also for certain appropriate experience as instructor, consultant, or investigator.

For positions in Children's Bureau additional progressive experience in specialized fields of maternal or child health is required for the top grade and may be substituted for part of the general experience prescribed for the other grades.

Applications must be filed with the U. S. Civil Service Commission, Washington, D. C., and will be accepted until the needs of the service have been met. Forms may be obtained direct from the Commission or at any first or second class post office.

Physicians Needed in Canal Zone

The U. S. Civil Service Commission announces an examination to secure physicians for clinical service in the Panama Canal Zone. Graduation from a class A medical school subsequent to May 1, 1920, is required, and the applicant must be under 50, 25 to 35 years of age preferred. Entrance salary $4,000. Persons interested should communicate with the U. S. Civil Service Commission, Washington.

Merit System Council, Oregon State Board of Health and Crippled Children's Division, University of Oregon Medical School

have announced merit examinations in practically all professional public health fields, including Health Officers, Nurses, Sanitary Engineers, Laboratory Workers, Vital Statisticians, Consultants in the fields of Health Education, Hearing and Vision, Nutrition, Oral Health and Physiotherapy. Two clerical positions, Fiscal worker and Administrative Clerk are included in this list as is also the position of Merit System Personnel Technician.

Interested persons may get full particulars regarding the positions and examinations by writing H. J. Sears, Merit System Supervisor, P. O. Box 88, Portland, Ore.

The Indiana State Personnel Division, 141 South Meridian Street, Indianapolis, announces that applications may be filed at any time until further notice for the following positions:

Orthopedic Nursing Consultant I (women only)	$150–200 mo.
Physician I (General)	165–250 mo.
Physician II (General)	250–325 mo.
Physician II (Tuberculosis)	250–325 mo.
Physician I (Psychiatric)	185–265 mo.
Physician II (Psychiatric)	250–325 mo.
Local Public Health Director	300–360 mo.

POSITIONS AVAILABLE

Physician with either public health training or experience in local health department administration to serve as health director in a county health department in mid-western state. Salary $4,000 and $500 travel (flat rate). Well established department with offices in attractive little city of 10,000. Write **Box T,** Employment Service, A.P.H.A.

Wanted: Trained Public Health Nurse, starting salary $1,500 per year and traveling expense, increase to $1,620 within 6 months. Saginaw County Health Dept., Saginaw, Mich.

Western state department of health will consider applications from physicians to fill four existing vacancies among county health officers, one vacancy in venereal disease control and positions as laboratory technicians. Write **Box S,** Employment Service, A.P.H.A.

County Public Health Nurses for New Mexico. Must have four months' postgraduate instruction under one of the recognized public health nursing courses and one year's experience. Must drive and have a car. Address inquiry to State Health Department, Santa Fe, N. M.

PUBLIC HEALTH ENGINEER

Responsible professional public health engineering involving field investigations and office studies in the application of sanitary measures. The more difficult engineering and sanitation field surveys include supervision over public water supplies, sewerage systems and sewage treatment plants and review of plans for same, and promotion and supervision of sanitation programs. Minimum qualifications: Training and experience equivalent to 3 years' civil engineering experience, including 2 years in public health or sanitary engineering; *or* completion of an academic year of graduate study and a year's experience in sanitary or public health engineering; *and* graduation from a college of recognized standing with a major course in civil or sanitary engineering. The salary range is $205 to $250 per month depending upon experience. Apply **Box E,** Employment Service, A.P.H.A.

Southwestern state health department seeks 2 physicians for assignment to district health units, personally to conduct several small venereal disease clinics on a rotating schedule. Experience preferred but not required. Salary $3,000, plus actual travel allowance not to exceed $1,200. Write **Box V,** Employment Service, A.P.H.A.

The New Mexico State Department of Public Health will consider applications for the position of Assistant Director of the Maternal and Child Health Division. Address inquiries to the State Department of Public Health, Santa Fe, N. M.

Wanted: Trained Public Health Nurse, starting salary $1,500 per year and traveling expenses. Increase may be expected within 6 months. Shiawassee County Health Department, Corunna, Mich.

Sanitarian Wanted: Starting salary $1,800 per year with travel allowance of $50 per month. Man must have his own car. Bachelor's degree followed by at least one year's course or its equivalent in subjects necessary for one entering the public health field, or an engineering degree plus one year's experience in sanitary or public health engineering required. A course in public health training may be considered as an equivalent for a part of the experience requirement. Apply Director District Department of Health No. 6, Central Office, Newberry, Mich.

Wanted: Nurse for county health work. Salary $1,800 per year with travel allowance (additional) of $500 per year. Address District Health Department 2, West Branch, Mich.

Instructor in Bacteriology, Medical School, large midwestern university, M.D. (or Ph.D. or D.Sc. in Bacteriology); Male. Salary $1,800 to $2,500 according to age and experience. Write **Box D,** Employment Service, A.P.H.A.

Bacteriologist with Ph.D. or equivalent and teaching experience wanted in western state university. Must be immune to military service call. Salary about $2,500. Write **Box A,** Employment Service, A.P.H.A.

Laboratory technician wanted. Salary $1,500. Apply Dr. R. G. Beachley, Director of Health and Welfare, Arlington County Health Department, Arlington, Va.

POSITIONS WANTED

ADMINISTRATIVE

Teaching or administrative position desired by physician, aged 48. Experienced teacher in preventive medicine and public health, now employed at prominent medical school; 20 years' experience in municipal health administration and epidemiology. **A-491**

Physician, B.S., M.D., and M.S.P.H., University of Michigan, aged 35, experienced city-county health administration and as director university student health service. Will consider permanent responsible position offering good income. **A-492**

Physician with 25 years full-time experience in public health administration is available for immediate appointment. Moderately hard of hearing; otherwise fully able. Salary $4,500 or better. **A-497**

Physician, M.D., C.P.H., aged 47, seeks position in administrative work. Experienced in venereal disease control and industrial medicine. **A-485**

Physician, aged 47, M.D. Creighton University, M.S.P.H. Michigan, experienced in school health and as director of county health unit, seeks position as administrator in state or local health department. **A-498**

Physician, aged 37, M.D., McGill, D.P.H., Toronto, experienced as health officer and director of public health training, seeks position in administrative work. **A-499**

WOMEN PHYSICIANS TRAINED IN PUBLIC HEALTH

Woman aged 34, M.D., University of Basle, Switzerland, M.S.P.H. DeLamar Institute, Columbia University. U. S. citizen. Excellent references. Especially interested in industrial hygiene. **A-493**

Woman aged 41, M.D. Columbia University, M.S.P.H. DeLamar Institute, experienced in epidemiology and research, seeks position offering administrative experience. **A-494**

Woman physician, aged 48, M.D., University of Vienna. Excellent European pediatric experience. Seeks position in pediatrics, administration or statistical research. **A-495**

Woman physician, M.D., Rush, M.P.H., Michigan, 13 years' experience in school medical service and administrative county health unit, seeks administrative position. New York area preferred. **A-500**

HEALTH EDUCATION

Health Educator, Negro, man with background of High School administration and M.S.P.H. from University of Michigan, seeks position in Health Education. Public agency or educational field. Excellent references. **H-497**

Health Educator, M.A. in Education, 10 years' background in community organization for public health education, also teaching of personal and community health at high school and college levels. Public health nurse, able to teach mental and social hygiene as well as general health education. East preferred. **H-498**

Teacher and research worker, man, Ph.D., age 52. Extensive record as college professor of biology and hygiene and investigator, for the past two years engaged in research. **H-499**

Woman, Sc.D., Johns Hopkins, M.S., Chicago. Chief interests health education, nutrition, biochemistry, 14 years' teaching experience in college, 7 years head of departments. Excellent recommendations. **H-505**

Health Educator. Man with M.S. in preventive medicine and public health. Negro. Seeks position in Health Education or field work with official or nonofficial agency. **H-500**

Woman with master's degree in health education, 12 years' successful experience in public school and college teaching, administration and research. Will consider position in normal school, public schools, or in official or nonofficial health agencies. Prefers South or East. Available at once. **H-501**

LABORATORY

Milk Sanitarian and Technologist, age 37, Ph.D., Bacteriology, Wisconsin, 10 years' experience in milk and food sanitation from industrial and official angle, seeks administrative position with opportunity for research or investigational work preferred. **L-381**

Chemist, Sc.D., Biochemistry, Johns Hopkins University. Age 31. Public health laboratory experience, teaching experience. Desires position with promise of advancement, preferably in commercial organization. **L–461**

Bacteriologist, young man 28, with B.S. in industrial science, experienced in newspaper work, salesmanship and now employed in state department of health laboratory, seeks position as bacteriologist or doing promotional work of public health nature. **L–465**

MISCELLANEOUS

Veterinary Doctor, M.P.H., University of Pennsylvania, age 27, with two years of practice, seeks position in food, meat, milk, or livestock sanitation with state or local health department. Also interested in teaching position with research facilities. **M–451**

Public Health Nurse with M.A. degree wishes position in health supervision and teaching in college or public school. West preferred. **M–452**

Administrative Assistant or Health Educator, woman, M.A. 10 years' experience in health agency offices; 7 years' teaching experience; writer on health and other subjects; experienced in independent research; some training in social work; some hospital experience. **M–453**

NEWS FROM THE FIELD

NEW YORK CITY CHANGES HEALTH COMMISSIONERS

MAYOR LaGUARDIA on July 16 announced the resignation, on account of ill health, of John L. Rice, M.D., who has been Commissioner of Health since January 1, 1934, and the appointment of Ernest L. Stebbins, M.D., M.P.H., Professor of Epidemiology at the DeLamar Institute of Public Health, Columbia University, New York, N. Y., as Commissioner, effective immediately. Dr. Rice will continue to serve the City as a special consultant.

Dr. Stebbins, who was born in Iowa in 1901, is a graduate of Dartmouth College, the Rush Medical College, Chicago, in 1929, and of Johns Hopkins University School of Hygiene and Public Health in 1932. He served as epidemiologist of the Virginia State Department of Health in 1931, and from 1932 to 1934 was Health Officer of Henrico County, Virginia. From 1934 to 1940 he was a staff member of the New York State Department of Health, serving as epidemiologist, district health officer, Director of the Division of Communicable Diseases, and Assistant Commissioner. Dr. Stebbins is Secretary of the Epidemiology Section of the American Public Health Association, and a member of the Governing Council.

A.P.H.A. SURVEY IN ILLINOIS

UNDER the auspices of the Committee on Administrative Practice of the American Public Health Association and its Subcommittee on State Health Administration, a survey of public health administration in Illinois has been under way for several months. Carl E. Buck, Dr.P.H., Field Director of the committee, has been in charge of the study with the assistance of a local staff.

A progress report entitled "Public Health Needs in Illinois" is summarized by the *Illinois Health Messenger* as recommending the creation of a state-wide public health committee which should endeavor to develop a widespread popular understanding of the importance of state and local health departments so that politics may not interfere with the appointment or retention of properly qualified public health personnel and the plans for developing services. The report recommends that a public health building be provided to house the state department of public health. It is further recommended that the state construct and maintain one or more state tuberculosis sanatoria in those areas not adequately served by existing hospital facilities, and that a county sanatorium of about 2,000 beds be constructed in Cook County for patients outside of Chicago.

The progress report recommends that the State Department of Public Health in Illinois be given specific authority to control the installation and operation of all public water systems and that the department be authorized to require proof of competency from all operators of public water purification plants, sewage treatment works, and pasteurizing plants. Other recommendations are made by this progress report.

The work of organizing the recommended non-partisan State-wide Public Health Committee is already under way. Several local lay committees for public health education which have been functioning for some time in various sections of the state have already offered coöperation and eventually it is expected that these local groups will elect to affiliate with the larger organization.

The primary responsibility of the

Illinois State-wide Public Health Committee will be "to disseminate accurate information for the purpose of developing a widespread, intelligent lay understanding of existent public health problems, what is being done, and what can be done to solve them." Serving as Chairman of the committee is Frederic C. Woodward, Vice-President Emeritus of the University of Chicago, a man long known as a public spirited leader in civic affairs, a distinguished educator, and a lawyer of national reputation. Mr. Woodward is dividing the state into ten or twelve districts, for each of which he will later appoint a district chairman to facilitate committee operations. Eventually there are to be affiliates or subdivisions of the state-wide organization in every county.

In order that these groups may effectively define public health problems and suggest ways and means of meeting them, they will consult the state and local public health authorities. For this purpose the Illinois Director of Public Health, Dr. Roland R. Cross, has made available to Mr. Woodward the services of the personnel of the State Division of Public Health Instruction, under the direction of Mrs. Leona East, Chief.

HEALTH GAINS IN GREAT BRITAIN

A SUMMARY of a statement made by the British Minister of Health, Mr. Ernest Brown, before the House of Commons, was carried by *The New York Times* on July 1. According to the Minister of Health, Britain's health after almost three years of war was in many ways better than it has been, even despite an increase in tuberculosis and spinal meningitis. He stated that diphtheria was still the greatest killing disease of children between the ages of 4 and 10, and that diphtheria had killed more children last year than did German bombs.

Scarlet fever and typhoid fever had become scourges of the past, the former claiming only 133 victims in 1941, and the latter 143 out of fewer than 5,000 cases. He said that the lack of serious typhoid fever epidemics after bombings was one thing which proved surprising to United States visitors but that no deaths during heavy bombings were caused by water-borne infection.

Confirming statements made by Sir Wilson Jameson, Chief Medical Officer of the Ministry of Health, before the American Public Health Association at the 1941 Annual Meeting, Mr. Brown said that there had been a drop in admissions to insane asylums. These had stood at 30,000 in 1938 and 1939 but dropped to 28,000 in 1940 and to 26,000 in 1941. Tuberculosis, he said, was giving the most trouble, probably because of blackout crowding and the cessation of house building. The nursing situation was unsatisfactory, particularly in the case of tuberculosis.

MERIT SYSTEM CONSULTATIONS

PROVISIONS will be made at the 71st Annual Meeting of the American Public Health Association in St. Louis, October 27–30, for consultations between those concerned with the administration of merit system plans and the staff of the Association conducting the Merit System Study under the auspices of the Committee on Professional Education. Appointments for consultation on this subject with Dorothy Deming, R.N., may be made through the Association office in the Auditorium.

LESLIE DANA GOLD MEDAL

THE Leslie Dana Gold Medal, awarded annually for outstanding achievements in the prevention of blindness and the conservation of vision, will be presented this year to Lewis H. Carris, Director Emeritus of the National Society for the Prevention of Blindness.

PENNSYLVANIA PUBLIC HEALTH ASSOCIATION

THE Pennsylvania Public Health Association, under the Presidency of Lieutenant Colonel A. Parker Hitchens, M.C., met in Pittsburg on May 15 jointly with the Pennsylvania Association of Dairy Sanitarians and the Tri-State Food and Health Association. A resolution passed by the Pennsylvania Public Health Association (in abridged form) follows:

WHEREAS: The Pennsylvania Public Health Association, recognizing the importance to the public health and the public welfare of the dairy industries, at this particular period in our National History; and recognizing the fact that the dairy farmers, the processors and the distributors, and especially the consumers of dairy products, owe their greatest debt to sanitary science; and recognizing the commencement of the era of the scientific study and handling of milk and other dairy products in the bacteriological work initiated by Professor William T. Sedgwick, of Boston, Mass., and

WHEREAS: A painstaking review of the accomplishments of this Half Century of Milk Sanitation has revealed overwhelming evidence in support of the fact that no milk, however carefully each stage in its production is supervised, can be considered safe for human consumption unless it is collected in a cleanly manner, cooled quickly, pasteurized properly, adequately protected after pasteurization, and kept cold until its final utilization or preparation for use in the dietary, and

WHEREAS: the present needs of our country are causing everyone to explore the possibilities of curtailing the expenditure of time and materials to the limit of practicability and expediency, the public welfare demands that no procedure be authorized which may tend to reduce the consumption of wholesome, pasteurized milk; therefore be it

RESOLVED: that the Pennsylvania Public Health Association convened in this joint celebration of a Half Century of Milk Sanitation heartily acknowledges its debt to the pioneer work of William T. Sedgwick, to other scientists, and to all the various workers in agriculture and in industry who have contributed to our recognition of the value of milk in human nutrition and to the development of methods by which safe milk can be produced economically and made universally available; and be it further

RESOLVED: that in recognition of the dangers of infection to which milk is constantly exposed, it is the considered opinion of these associations that only milk that has been properly pasteurized or boiled should ever be used for human nutrition; and, be it further . . .

RESOLVED: that any measure which may tend to curtail the availability of fresh and pasteurized milk is firmly opposed and the opinion is recorded that responsible officials should use every effort to prevent the adoption of any such measure or practice; and be it further

RESOLVED: that in promulgating these resolutions this Association is acting in accordance with its conviction that raw milk is always a potential carrier of dangerous infection and that now there is more reason than at any other period in our Nation's history to do everything possible to control preventable disease, and be it further

RESOLVED: that it is our considered opinion that *not to control disease is sabotage.*

HEALTH EDUCATION IN MALARIA CONTROL

THE U. S. Public Health Service has recently initiated an interesting experiment in health education as a part of its program for malaria control in war areas. A local teacher has been employed for the summer in each of 25 counties in 7 southern states to organize the communities in and around war areas for health education in malaria control. The teachers were assembled in Memphis, Tenn., June 16–26, and given an intensive course on the essential facts of malaria control and methods of community organization for health education. After completing the orientation course, the teachers returned to their own counties and were assigned to the local health department as health educators. They will give particular attention to educating their communities in malaria control measures.

It is anticipated that the teachers will continue health education as a part of their regular activities in their respective schools during the coming year.

ASSOCIATION OF FOOD AND DRUG OFFICIALS OF THE UNITED STATES

THE 46th annual conference of the Association of Food and Drug Officials of the United States was held at the Pennsylvania Hotel, New York, N. Y., June 1–5. The newly elected officials are as follows:

President—Sarah V. Dugan, Director, Bureau of Foods, Drugs and Hotels, State Department of Health, Louisville, Ky.

Vice-President—H. C. Lythgoe, Director, Division of Foods and Drugs, State Department of Health, Boston, Mass.

Secretary-Treasurer—J. C. Schneider, Chief, Bureau of Food and Drugs, State Board of Health, Indianapolis, Ind.

Executive Committee—W. A. Queen, U. S. Food and Drug Administration, Washington, D. C.; George Marsh, Director, Division of Agricultural Chemistry, State Department of Agriculture and Industries, Montgomery, Ala.; Jacob W. Forbes, Head, Food and Drug Section, State Department of Health, New Orleans, La.; William F. Reindollar (Chairman of the Editorial Committee), Chief, Bureau of Chemistry, State Department of Health, Baltimore, Md.

INDUSTRIAL HYGIENE AND MEDICAL SERVICE IN THE WAR INDUSTRIES

IT has been announced by James G. Townsend, M.D., Chief of the Division of Industrial Hygiene, National Institute of Health, Bethesda, Md., that, on the request of the Committee on Industrial Medicine of the National Research Council, a manual is being prepared on the above subject intended for wide distribution among the medical profession. The general editor will be William M. Gafafer, Sc.D., Chief of the Statistical Unit of the Division of Industrial Hygiene, National Institute of Health.

The Committee on Industrial Medicine of the Division of Medical Sciences, National Research Council, has pointed out that the change-over of industry to the manufacture of war materials is resulting in modifications of occupational health hazards, the introduction of new occupational disease exposures and certain variations in the industrial medical procedures. The following are illustrative:

1. There is increased usage of cutting oils, compounds, and chemicals, many of which are capable of causing the industrial dermatoses.

2. Grinding operations have multiplied and these entail exposures to aluminum oxide, silicon carbide, and other grinding materials. While the dusts from grinding operations have not been regarded as harmful to health, disabilities occurring in workers so exposed are coming to be regarded as compensable.

3. Shot blast operations are being replaced by sand blasting, and new installations of this nature are consistently using sand.

4. In an effort to speed up pickling operations, there is a tendency to increase the concentrations of acids in the pickling tanks, with consequently more contamination of the air with fine droplets of the acids.

5. Solvents are being more widely used and certain of the newer ones are purported to be non-toxic. Inasmuch as most of them are in the chlorinated hydrocarbon group of chemicals, they can be assumed to be more or less toxic.

6. Paint spraying operations are being modified, requiring radical readjustments in ventilation procedures.

7. There is a tendency toward longer working hours and, consequently, longer hours of exposure to harmful materials and shorter periods of recuperation.

8. It is becoming more and more necessary to employ women, older men, and young men who are not eligible for military service, many of whom require selective placement, which is a function of the plant medical service.

9. It is necessary that the medical service in the war industries be integrated with the emergency medical service of civilian defense. Details necessary to this objective are not understood by the industrial physicians as yet.

PHYSICAL THERAPY COURSE AT COLUMBIA UNIVERSITY

COLUMBIA University announces that beginning September, 1942, a program of professional studies for the training of Physical Therapy technicians will be offered. This training and instruction will extend over a two year period, and has been organized in compliance with the requirements set

down for such programs by the Council of Medical Education and Hospitals of the American Medical Association. The course is being set up in University Extension in close relationship with the College of Physicians and Surgeons of Columbia University, and the Nursing, Education and Health, and Physical Education Departments of Teachers College. The clinical and laboratory instruction will be given at the Vanderbilt Clinic, Neurological Institute, Presbyterian Hospital, and New York Orthopedic Dispensary and Hospital.

Two years or 60 semester hours of college, including courses in Physics and Biology, shall be required, or graduation from an accredited School of Nursing or an accredited School of Physical Education.

A Certificate of Proficiency in Physical Therapy will be granted by Columbia University to those completing the course. Further information may be obtained by writing the Office of the Committee on Physical Therapy, Room 303 B, School of Business, Columbia University, New York, N. Y.

SURVEY OF CONNECTICUT HOUSING

THE Committee on the Hygiene of Housing of the American Public Health Association has published the results of test surveys of housing conditions in slum and low-rent areas, conducted in three Connecticut cities. These studies were made with the appraisal technic developed by the committee as a guide to housing inspection and enforcement by local health departments.

The committee's report, published in the February 27 and April 3, 1942, issues of *Public Health Reports*, shows that the method used for rating the quality of housing provides a clear discrimination between adequate and substandard dwellings, and also that it furnishes specific guidance for remedial measures by enforcement agencies. Reprints of the report are available on request from the Committee on the Hygiene of Housing, 310 Cedar Street, New Haven, Conn.

This appraisal technic has been officially adopted for a demonstration survey in a large district of slums and blighted areas of New Haven, Conn., which is now being conducted under the joint sponsorship of the local health department, housing authority, and city plan commission, the Connecticut Department of Health, and the Committee on the Hygiene of Housing. It is the purpose of the coöperating agencies to develop a comprehensive and integrated official program of housing enforcement, rehabilitation and reconstruction for the problem areas covered by the survey, and to stimulate the extension of such coöperative studies to other portions of New Haven and to other cities.

A.M.A. RESOLUTION

AT the recent meeting of the American Medical Association in Atlantic City, the Section on Preventive and Industrial Medicine and Public Health adopted a resolution, which was later presented and adopted by the House of Delegates, relating to the health protection of the civil population. The resolution follows:

WHEREAS a major factor in the inadequate health protection of the civil population of the nation in peace and war time is the failure to provide for each population unit and each area of jurisdiction, whether city, county, or district, with a full-time, trained health officer and necessary accessory personnel on a merit basis and supported by sufficient local tax resources supplemented by state and, where required, by federal funds, therefore be it

RESOLVED that the Section on Preventive and Industrial Medicine and Public Health urge the Trustees of the American Medical Association to obtain a complete coverage of the population and the area of the United States with full-time, trained health services at the earliest practicable date.

DELAWARE PUBLIC HEALTH ASSOCIATION

THE Delaware Public Health Association held its first annual meeting in Wilmington, Del., June 5, with over 100 in attendance at the all-day sessions. The association is planned as a further step in coöperation between state health and welfare workers and the officers represent five different organizations and the membership seventeen groups.

President—Edwin Cameron, M.D., Executive Secretary, State Board of Health
First Vice-President—G. H. Gehrman, M.D., Medical Director, duPont Company
Second Vice-President—Anna VanW. Castle, Head of the Visiting Nurses Association
Secretary—G. Taggart Evans, Executive Secretary, Delaware Anti-Tuberculosis Society
Treasurer—Roger Murray, M.D., former head of the Wilmington Board of Health

Speakers at the annual meeting included Dr. R. C. Williams, Senior Surgeon, U. S. Public Health Service; Lt. Col. A. G. Compton, M.C., of Fort duPont; Charlotte Heilmann, a representative of the North Atlantic Area of the American Red Cross; Ethelda B. Mullin, Executive Secretary of the Wilmington Family Society; and Richard C. Beckett, sanitary engineer for the Delaware State Board of Health.

NATIONAL HEALTH LIBRARY

THE National Health Library at 1790 Broadway, New York, N. Y., is maintaining a card file of magazine references on health, national defense and war. The file is subdivided under general headings such as child welfare, civilian health, industrial hygiene, mental hygiene, nutrition, social hygiene, tuberculosis, etc. At present there are over a thousand entries and additions are made daily. So far there have been reproduced for distribution five lists of references in relation to child welfare, civilians' mental and physical health, industrial hygiene, nutrition and tuberculosis. A limited supply of these lists is available for distribution on request.

A. M. A. EXHIBITS

THE American Medical Association at its 93rd meeting in Atlantic City, N. J., awarded gold medals in the exhibit to Dr. John C. Bugher and Manual Roca-Garcia of the National Department of Health, Bogota, Columbia, for their exhibit on the means by which jungle fever is spread by mosquitoes.

Special certificates of appreciation were awarded to eleven exhibits from Latin-American republics. There were also a number of certificates of merit and a special certificate of merit given to demonstrations of the Kenny method for the treatment of infantile paralysis.

DRINKING FOUNTAIN STANDARD

THE American Standards Association, New York, N. Y., has announced that new American Standard Specifications for Drinking Fountains (Z4.2–1942) have been adopted by the American Standards Association as of January 14, 1942 (supersedes Z4.2–1935).

The new standard was revised at the suggestion of the Committee on Research and Standards of the American Public Health Association and is essentially identical with the A.P.H.A. standard published in the 1933–1934 *Year Book*, pages 82–83, as the Appendix of the report of the Committee on Plumbing of the Engineering Section.

NEW PUBLIC HEALTH NURSING CURRICULA

THE curriculum in Public Health Nursing in the School of Public Health, The University of North Carolina, Chapel Hill, is now on the accredited list of the National Organization for Public Health Nursing of programs of study in Public Health Nursing for graduate nurses, as are also the curricula at Seton Hall College, Newark, N. J., and the University of Pittsburgh, Pittsburgh, Pa.

13TH ANNUAL MEETING WESTERN BRANCH, A.P.H.A.

SEATTLE, Wash., was the scene of the 13th Annual Meeting of the Western Branch and related groups, May 26–29. A strong local community under the Chairmanship of Honoria Hughes, with the active support of Dr. Donald G. Evans, Washington State Health Officer, and his staff, provided an excellent physical setting, and a Program Committee under the Chairmanship of Dr. Adolph Weinzirl, Portland, Ore., provided features of outstanding quality. The Western Branch, under the Presidency of Dr. John J. Sippy of California, and under the leadership of W. Ford Higby of San Francisco, had a good year.

The first day provided conferences of state supervisory nurses, of workers in maternal and child health and crippled children's services, in social hygiene, in vital statistics, and in various aspects of the Indian Service.

Unusually representative participation was secured from outside the territory of the Western Branch. The address of Dr. Harry S. Mustard, Director of the DeLamar Institute of Public Health, Columbia University, New York, N. Y., on "The Need for More Adequate Public Health Programs" will be remembered by many in attendance. It will be published in an early issue of the *Journal*. Dr. Albert McCown, Medical Director of the American National Red Cross, Washington, D. C., Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense, Washington, D. C., Dr. Kenneth F. Maxcy, Professor of Epidemiology, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Marjorie M. Heseltine, Children's Bureau, Washington, Dr. James G. Townsend of the National Institute of Health, Bethesda, Md., Dr. Orlen J. Johnson of the American Medical Association staff, Dr. Mark V. Ziegler of the U. S. Public Health Service, Chicago, Mary J. Dunn, U. S. Public Health Service, Washington, Dr. Edwin F. Daily, Children's Bureau, Washington, and Dr. Reginald M. Atwater, Executive Secretary of the American Public Health Association, were among participants from other parts of the country, in addition to more than 600 in attendance from the western states and provinces, the Territory of Alaska and other parts of the Western Branch area.

PUBLIC HEALTH RESEARCH INSTITUTE OF NEW YORK CITY

THE City of New York, on July 1, entered into a contract said to be unique in municipal history with the Public Health Research Institute of the City of New York, Inc., a recently formed, non-profit, scientific institution. The contract is in force for a period of ten years and is automatically renewable for similar periods unless previously abrogated, and provides for the payment by the city to the Institute of $100,000 annually. The money is to be used by the Institute to carry on fundamental medical research through a staff of competent scientists under the direction of a research council composed of leading authorities in the field of medicine, biology, physiology, nutrition, public health and related fields.

The services to be rendered by the Institute to the City include research and investigation into the control of diseases such as influenza, poliomyelitis, arthritis, degenerative diseases and general physiological problems such as nutrition. Also generally to engage in laboratory experimentation and research in order to develop better and more economical biological products and improve technical procedures for use in combating diseases in epidemics. The Institute will assist the director of the Bureau of Laboratories of the Depart-

ment of Health in matters involving public health research. The City on its part agrees to permit the Institute to use premises now occupied by the Bureau of Laboratories of the Department of Health at the William Hallock Park Laboratory or elsewhere without charge. The results of the Institute's research are to be the property of the City and any discovery of products or methods which may be made by anyone employed by the Institute will belong to the City as soon as made and there will be no further compensation. All patents issued to the Institute or to any of its employees shall be assigned immediately to the City. Unless the City notifies the Institute not less than one year prior to the termination date of this agreement, it will automatically renew itself on June 30, 1952, for a period of ten years.

The Board of Directors of the Institute includes David Heyman, President of the New York Foundation, the Mayor of New York, the Comptroller, Commissioner of Health Dr. John L. Rice, David Rockefeller as vice-president, Edwin F. Chinlund, treasurer, and David Morse, secretary. The research council in charge of all scientific programs is under the chairmanship of Dr. Thomas M. Rivers, director of the hospital of the Rockefeller Institute for Medical Research, New York, now of the Navy Medical Reserve Corps, and Drs. Eugene L. Opie, Henry C. Sherman, George Baehr, Michael Heidelberger and Ralph S. Muckenfuss, Director of the Bureau of Laboratories, New York City Department of Health.

NURSING PERSONNEL POLICIES AND SALARIES

IT has been announced by Alma C. Haupt, R.N., Executive Secretary of the Subcommittee on Nursing of the Office of Defense, Health and Welfare Services, Washington, that, at a recent meeting the Subcommittees on Nursing and Hospitals, impressed by the shortage of nurses and the increasing needs of the army and navy for additional personnel throughout this year and next, felt that the shortage of graduate nursing personnel in civilian institutions was, in many instances, largely due to personnel policies and salaries.

The committees adopted a resolution calling to the attention of hospital authorities the revised *Manual of the Essentials of Good Hospital Nursing Service,* published by the American Hospital Association and the National League of Nursing Education, with the urgent request that the personnel policies therein be thoughtfully reviewed in relation to the policies effective in institutions under their control in order that graduate nurses may be encouraged to remain in institutional service rather than going into non-nursing work, and that a large number of qualified young women may be attracted to enter schools of nursing.

CLEVELAND FOUNDATION GRANT

SUPPORTING the Cleveland Health Museum in its program to "go to the people" when tire and gasoline shortages prevent people from coming to the museum, the Cleveland Foundation has made a grant which will be used for assisting in construction and installation of health exhibits throughout Greater Cleveland.

Dr. Bruno Gebhard, museum director, suggested that groups interested in obtaining neighborhood exhibits consult the museum. He reported that requests for the "Food for Health" traveling display have become so numerous that duplicates are being constructed.

HANDBOOK OF SCIENTIFIC AND TECHNICAL SOCIETIES

THE National Research Council has announced publication of the 4th edition of the *Handbook of Scientific*

and Technical Societies and Institutions in the United States and Canada. The United States section contains information on 1,269 societies, associations and similar organizations in the natural sciences and related fields contributing to the advancement of knowledge through their meetings, publications and other resources. The Canadian section contains information concerning 143 organizations.

Copies of the *Handbook* can be obtained through the Book Service of the American Public Health Association at the list price of $4.00.

HERMAN KIEFER HOSPITAL STAFF CHANGES

APPOINTMENTS were recently made of G. R. Harris, formerly Superintendent of Public Welfare for the City of Detroit, as Hospital Administrator of the Herman Kiefer Hospital; and Franklin H. Top, M.D., as Medical Director. Dr. Top retains his former position as Director of the Division of Communicable Diseases and Epidemiology of the Detroit Department of Health and of the Herman Keifer Hospital.

PERSONALS

Central States

RICHARD F. BOYD, M.D.,† recently Assistant to the Chief of the Division of Local Health Administration, Illinois Department of Public Health, Springfield, has been appointed Acting Chief of the Division, succeeding MARVIN F. HAYGOOD, M.D., C.P.H.,† deceased, who was to have become Chief of the Division of Local Health Administration on July 1. Dr. Haygood had recently resigned as a staff member of the Iowa State Department of Health, Des Moines.

DONALD E. BUX, M.D., of Manhattan, Kans., has been appointed full-time Health Officer of Cherokee County, with offices in Columbus, succeeding JOSEPH W. SPEARING, M.D.,† who resigned to become Medical Director of the Kansas Ordnance Plant at Parsons.

JOHN A. CARSWELL, M.D., D.P.H.,† has resigned as Deputy Commissioner of Health in the Peoria, Ill., Department of Health, to accept a position as Commissioner of Health, Santa Barbara County Department of Health, Santa Barbara, Calif. He is succeeded in Peoria by H. V. HULLERMAN, M.D.†

WILLIAM H. CARY, JR.,* has been appointed as Sanitary Engineer (R), U. S. Public Health Service, and as Regional Engineer in the Office of Civilian Defense, Sixth Region, Chicago, Ill. He formerly served with the Department of Health, Detroit, Mich., as Sanitary Engineer.

WILLIAM C. GIBSON † was recently appointed a First Lieutenant in the Sanitary Corps of the U. S. Army, with orders to active duty at Key Field, Miss. He will be on leave of absence from his position as Sanitary Engineer of the Hillsdale County Health Department, Hillsdale, Mich., and the W. K. Kellogg Foundation, for the duration of the war.

JACQUES P. GRAY, M.D., M.P.H.,* former Health Director of Hillsdale County, a unit of the Michigan Community Health Project of the W. K. Kellogg Foundation, resigned July 1, to assume the position of Professor of Public Health and Preventive Medicine and Dean of the Medical College of Virginia, effective July 1.

A. L. MILLER, M.D.,† Nebraska State Health Director, Lincoln, has announced his candidacy for the Republican nomination to Congress. According to the press, Dr. Miller has stated that he would resign his position to devote full time to his campaign.

* Fellow A.P.H.A.
† Member A.P.H.A.

GEORGE F. MOENCH, M.D.,† has been appointed County Health Director, Hillsdale County Health Department, Hillsdale, Mich. He assumed his position in Hillsdale June 15, following a 5 months' experience as Acting Health Director for Calhoun County occasioned by the sabbatical leave of HUGH B. ROBINS, M.D.,† who has been health director for Calhoun County for the past 5 years.

CLARENCE D. SELBY, M.D.,* of Detroit, Mich., Medical Consultant with the General Motors Corporation, has been awarded the W. S. Knudsen Award of the American Association for Industrial Physicians and Surgeons in recognition for his "most outstanding contribution to industrial medicine."

Eastern States

ROBERT S. BREED, PH.D.,* Geneva, N. Y., Chairman of the Standard Methods Committee for the Examination of Dairy Products of the Laboratory Section, A.P.H.A., left early in July for Mexico City, to attend a conference on the means of increasing production of needed agricultural products in the Americas. This is the second trip which Dr. Breed has made to Mexico during the current year.

ROSABEL BURCH,† formerly on the staff of the National Office, Girl Scouts, Inc., New York, N. Y., has accepted a position with the Federal Security Agency, Office of Defense Health and Welfare Services, and is located at the Regional Office at 120 Boylston Street, Boston, Mass.

FRANCIS B. CARROLL, M.D., M.P.H., D.M.D.,† is on leave of absence from his position as State District Health Officer, Massachusetts Department of Public Health. He was called on active duty with the Medical Corps of the U. S. Army on August 1, 1941, and was assigned to the 16th Medical Regiment at Fort Devens, Mass. On February 10, 1942, he was transferred to Fort Knox, Ky., and assigned, under the authority of the Department of Preventive Medicine, of the Surgeon General's Office, as Camp Epidemiologist at Fort Knox.

DR. GEORGE FRAUENBERGER is now Director of the Division of Physically Handicapped Children, of the Department of Health of the City of New York. This position was formerly held by DR. LYMAN C. DURYEA and by DR. VERNON LIPPARD. As of the 1st of July, this Division became known as the Division of Physically Handicapped Children instead of Division of Crippled Children, the area of responsibility having been widened to include cardiac as well as orthopedically handicapped children. Dr. Frauenberger was formerly Director of Clinics at the Children's Hospital in Philadelphia, Pa., and has had a wide experience in pediatrics, child growth and development.

VLADO A. GETTING, M.D., DR.P.H.,† of Boston, Mass., recently District Health Officer with the Massachusetts Department of Public Health, has been appointed Commissioner of Health of Worcester, and entered upon his new duties in February. He succeeded PETER O. SHEA, M.D.,† deceased.

IRA V. HISCOCK, SC.D.,* of New Haven, Conn., who is serving a third five year term of office as member of the Board of Health Commissioners of New Haven, was recently elected President of the Board of Health Commissioners.

ERNEST B. HOWARD, M.D., M.P.H.,† of Boston, Director of the Division of Genito-Infectious Diseases of the Massachusetts Department of Public Health, has been commissioned in the

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† Member A.P.H.A.

Medical Corps of the U. S. Army and assigned as venereal disease control officer with the Fourth Corps Area headquarters in Atlanta, Ga.

PETER C. KARELEKAS, of Springfield, Mass., Junior Sanitary Engineer from the Massachusetts Department of Public Health, has been commissioned in the Sanitary Corps of the U. S. Army.

ELLIOT S. ROBINSON, M.D., PH.D.,* of Newton, Mass., Director of the Division of Biologic Laboratories of the Massachusetts Department of Public Health, has been commissioned in the Medical Corps of the U. S. Army with the rank of lientenant-colonel, and is in charge of army laboratory services in the office of the Surgeon General. GEOFFREY EDSALL, M.D.,† of Cambridge, formerly Assistant Director under Dr. Robinson, has been named Acting Director.

CLARENCE I. STERLING, JR., of Westfield, Mass., Assistant Sanitary Engineer from the Massachusetts Department of Public Health, has taken leave of absence to join the staff of the Office of Coördinator of Inter-American Affairs in the Division of Health and Sanitation, under the direction of Brigadier-General GEORGE C. DUNHAM, M.D., DR.P.H.* He has been assigned to Asuncion, Paraguay.

FREDERICK J. VINTINNER,† Director of the Division of Industrial Hygiene of the New Hampshire State Board of Health, Concord, left early in July for Army service at a post in Arkansas.

MYRON E. WEGMAN, M.D.,† recently of the School of Tropical Medicine, San Juan, Puerto Rico, has been appointed Director of Training in the Bureau of Child Hygiene of the Department of Health of the City of New York. Dr. Wegman will also be connected with the Cornell University Medical College and the DeLamar Institute of Public Health, and his duties will be to provide not only for in-service training of departmental employees but he will have much to do with the training of volunteers in child care work. The last incumbent of this position was ALBERT C. MCCOWN, M.D.†

C.-E. A. WINSLOW, DR.P.H.,* Anna R. Lauder Professor of Public Health, Yale University, New Haven, Conn., has been elected President of the National Association of Housing Officials, Chicago. Professor Winslow is Chairman of the Committee on the Hygiene of Housing of the American Public Health Association.

C.-E. A. WINSLOW, DR.P.H.,* Anna R. Lauder Professor of Public Health, Yale University, New Haven, Conn., has been designated by the Royal Sanitary Institute of Great Britain as representative of the Institute at the 71st Annual Meeting of the American Public Health Association in St. Louis next October 27–30.

Southern States

CHARLES ARMSTRONG, M.D., SC.D.,* Senior Surgeon of the U. S. Public Health Service, and Director of the Division of Infectious Diseases of the National Institute of Health, Bethesda, Md., is convalescing at Hamilton, Mont., from a severe attack of tularemia, as announced by *Science*. He was taken ill on May 25, a few hours after his arrival on an official visit to the Rocky Mountain Spotted Fever Laboratory at Hamilton.

DR. JOHN Y. BATTENFIELD, serving for several months with a special trachoma project in Oklahoma under the joint auspices of The National Society for the Prevention of Blindness, Inc., and the Oklahoma State Health Department, has been ap-

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† Member A.P.H.A.

pointed Medical Associate of the Society, in New York, N. Y. Dr. Battenfield was formerly Epidemiologist and Director of the Division of Preventable Diseases in the Oklahoma State Health Department, and he is President of the Oklahoma Public Health Association.

W. V. BESSONETTE, M.D.,† formerly Director of the Texarkana-Bowie County Health Unit, Texarkana, Tex., is now Director of the Palo Pinto-Parker Bi-county Unit.

LIEUT. EVAN C. BOURDON (M.C.),† Director of the Uvalde-Zavala-Kinney Health Unit, Uvalde, Tex., has been called into military service.

DEAN A. CLARK, M.D., Surgeon in the Division of Public Health Methods of the National Institute of Health, U. S. Public Health Service, Bethesda, Md., has been appointed as head of a Hospital Section organized to carry out the new program, recently announced by the OCD and the Federal Security Agency. Dr. Clark will also head a new Emergency Medical Section in the Public Health Service which will administer the program jointly with the Medical Division.

HESTER CURTIS, M.D., M.P.H., recently resigned as Director of the Division of Maternal and Child Hygiene, of the West Virginia State Health Department, to become Regional Consultant in the Children's Bureau, Washington.

DR. B. H. ESTESS, formerly of the Jasper-Newton County Health Unit, has been made Director of the Central Texas Health Department with offices at Belton, Tex. DR. R. S. LLOYD replaces Dr. Estess in the Jasper-Newton County Health Unit.

GEORGE A. GRAY, M.D.,† for the past year President of the Texas Public Health Association and Director of the Abilene-Taylor County Health Unit, Abilene, Tex., has been called into military service.

HERBERT HARGIS, recently returned from a year's leave of absence, during which he was assigned by the Pan American Sanitary Bureau to Bolivia, reported recently to the Austin-Travis County Health Unit, Austin, Tex., as Sanitary Engineer.

DR. PHILIP M. HAUSER, formerly Assistant Chief Statistician for Population in the Bureau of the Census, Washington, D. C., has been announced as Assistant Director of the Bureau, by Director J. C. Capt of the Bureau, effective July 1. Dr. Hauser will be in charge of social statistics, including population and housing statistics, vital statistics, the census of agriculture, and statistics relating to state and local government.

DR. LEE JANIS, of the U. S. Public Health Service, has assumed the directorship of the Texarkana-Bowie County Health Unit, Texas.

ALAN C. LOVE, M.S.,† for the past 3 years Sanitary Engineer with the Austin-Travis County Health Unit, Austin, Tex., has transferred to Waco with the new McClennan County Health Unit.

DR. EARL C. NORMAN, now Major Norman, formerly of the Uvalde-Zavala Health Unit, Uvalde, Tex., is now located in Bermuda.

THOMAS PARRAN, M.D.,* Surgeon General of the U. S. Public Health Service, Washington, D. C., was among those receiving honorary degrees at the 176th Commencement of Rutgers University, New Brunswick, N. J.

DR. W. B. PROTHRO, M.D.,† has assumed direction of the El Paso-Hudspeth County Health Unit, El Paso, Tex., replacing Dr. L. T. Cox, now in the U. S. Navy. Dr. Prothro is a brother of E. W. PROTHRO, M.D.,† Director of the Corpus

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† Member A.P.H.A.

Christi-Nueces County Health Unit, Corpus Christi, Tex., and is a graduate in public health from Johns Hopkins University.

GEORGE E. RILEY, M.D., of Jackson, Miss., has been named Health Officer of Clay County, with offices in West Point, Miss.

HORACE M. ROBERSON, M.D.,† Health Director for Bledsoe and Sequatchie Counties, Tennessee, has been named to a similar position in Rhea and Meigs Counties, succeeding HOLLIS C. MILES, M.D.,† of Dayton, who resigned to return to private practice in Cincinnati.

VAN C. TIPTON, M.D.,† formerly Director of the San Antonio City Health Department, San Antonio, Tex., and Field Director of the Division of Maternal and Child Health, is now Lieutenant Commander, stationed in Washington, D. C., with the Division of Communicable Diseases of the Bureau of Medicine and Surgery of the Navy.

Western States

DAVID D. CARR, M.D., C.P.H.,* recently of the Utah State Board of Health staff, Salt Lake City, Utah, has accepted the position of City Health Officer in Topeka, Kans.

W. V. CRUESS, PH.D.,† of the fruit products laboratory, College of Agriculture of the University of California, has been awarded the first Nicholas Appert Medal for outstanding contributions to the development of improved food preservation methods, by the Institute of Food Technologists at its recent meeting in Minneapolis.

J. EDWARD DEHNE, M.D.,† of Coquille, Ore., Health Officer of Coos County, has been ordered to active duty with the Army.

VERNON A. DOUGLAS, M.D.,† of Salem, Ore., Health Officer of Marion County, has been appointed Medical Officer for the Oregon State Defense Council.

ROBERT S. HAMILTON, M.D., has been appointed Health Officer of Clallam County and the city of Port Angeles, Wash., succeeding ALFRED E. EYRES, M.D.,† who recently resigned to take additional work in public health.

ROBERT T. LEGGE, M.D.,† Professor of Hygiene, and Chairman of the Department of Hygiene at the University of California at Berkeley, Calif., retires as Professor Emeritus after 28 years of service. Dr. Legge also was University Physician and Medical Director fo the Cowell Memorial Hospital for a quarter of a century.

FRANK MARION MELTON, M.D., of Brandenburg, has been appointed Health Officer for the Unit in Oldham County, Ky.

KARL F. MEYER, PH.D., M.D.,* Director of the Hooper Foundation of the University of California, San Francisco, has been appointed a member of the Medical and Health Advisory Committee of the American Red Cross.

A. V. NASATIR, M.D., C.P.H.,† formerly Director of the Division of Industrial Hygiene, Los Angeles City Health Department, Los Angeles, Calif., is now a Captain in the Industrial Hygiene Service of the Medical Corps in the U. S. Army. Dr. Nasatir is in charge of the medical program of industrial plants at Ogden, Utah.

MARTHA SHAMBERGER, B.S., M.P.H.,† who recently has completed her work at Yale University, has been appointed as a field worker with the Oregon Tuberculosis Association, Portland, with interests specializing in the field of statistics and public information.

ELMER S. TENNEY, M.D., DR.P.H. (Major, U. S. Army, Retired),† for nearly 7 years Deputy Health Officer

* Fellow A.P.H.A.
† Member A.P.H.A.

of Berkeley, Calif., resigned this position March 31.

Hawaii

PHILIP S. PLATT, PH.D., C.P.H.,* formerly Director, Palama Settlement, Honolulu, Hawaii, has been appointed Associate Director of the Committee on Voluntary Health Agencies, National Health Council, New York, N. Y., of which SELSKAR M. GUNN * is Director. Previous to his service in Hawaii, Dr. Platt was Assistant Director of the New York Tuberculosis and Health Association, and previously Associate Director of the Research Division of the American Child Health Association. He began his new work on July 1.

DEATHS

HENRY DWIGHT CHAPIN, M.D., Professor Emeritus of Children's Diseases at the New York Post-Graduate Medical School and Hospital, died June 27, at the age of 85.

LAWRENCE T. CLARK, SC.D.,* Director of the Biological Laboratories of Parke, Davis and Company, Detroit, Mich., died recently. According to the newspaper account, Dr. Clark was hit by a falling tree in a thunder storm at his country home near Howell, Mich., on May 29.

ABRAHAM LICHTERMAN, PHAR.D., of New York, N. Y., died recently.

ROY K. FLANNAGAN, M.D.,† Medical Director of the Department of Public Health of Virginia, Richmond, died June 18.

MARVIN F. HAYGOOD, M.D., C.P.H.,† Des Moines, Ia., died recently. He was to have become Chief of the Division of Local Health Administration of the Illinois State Department of Public Health on July 1.

DR. LARKIN E. STARK, Dental Consultant of the Texas State Department of Health, died on May 19, at his home in El Paso.

HENRY GOTTLIEB STEINMETZ, M.D.,† Assistant Director of the Venereal Division, Michigan Department of Health, Lansing, Mich., died on April 22, of anesthetic shock, at the age of 45.

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CONFERENCES AND DATES

American Association for the Advancement of Science. New York, N. Y. December 28–January 2.

American Chemical Society—National Chemical Exposition, National Industrial Chemical Conference. Stevens Hotel, Chicago, Ill. November 17–22.

American College of Surgeons—Clinical Congress. 32nd Annual. The 25th Annual Hospital Standardization Conference, sponsored by the College, will be held simultaneously. Stevens Hotel, Chicago, Ill. October 19–23.

American Congress of Physical Therapy—21st Annual Scientific and Clinical Session. Hotel William Penn, Pittsburgh, Pa. September 9–12.

American Hospital Association. St. Louis, Mo. October 12–16.

American Library Association — Midwinter Conference. Chicago, Ill. December 28–31.

American Public Health Association—71st Annual Meeting. Headquarters, Municipal Auditorium, St. Louis, Mo. October 27–30.

American Public Works Association. Cleveland, Ohio. October 18–21.

American Society for Public Administration. Chicago, Ill. December 27–28 (tentative).

American Society of Civil Engineers—Fall Meeting. New England. October.

American Water Works Association—
Michigan Section — Park Place Hotel, Traverse City, Mich. September 9–11.
Rocky Mountain Section—Frontier Hotel, Cheyenne, Wyo. September 17–18.
Western Pennsylvania Section — Roosevelt Hotel, Pittsburgh, Pa. September 18.
Minnesota Section—Lowrey Hotel, St. Paul, Minn. September 24–26.